# Muratec MFX-2050/MFX-1450 F-565/F-525 FACSIMILE SYSTEM

FIELD ENGINEERING MANUAL

MAI version 1

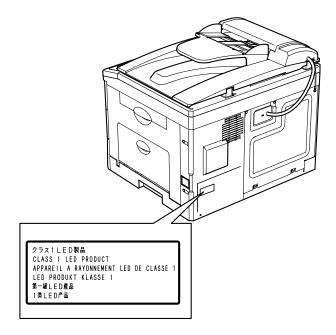
(28 June 2007)

MURATA MACHINERY, LTD COMMUNICATION EQUIPMENT DIV.

# **Safety Information**

#### **LED Safety Label**

A LED safety label is attached to the outside of the machine as shown below.



# **Battery Precautions**

Important: Muratec does not recommend the independent replacement of the batteries. The batteries are sold only as component parts of the main control PCB and Connect B PCB, and cannot be purchased separately from Muratec. Ni-MH (Nickel Metal Hydride) batteries are installed inside the machine as back up memory batteries. Be sure to dispose of them according to local, state and federal regulations.

#### **CAUTION**

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer.

Dispose of used batteries according to the manufacturer's instructions.

Il y a un danger d'explosion s'il y a un remplacement incorrect de la batterie. Remplacer uniquement avec une batterie du même type ou d'un type recommandé par le constructeur. Mettre au rebut les batteries usagées conformement aux instructions du fabricant.

Germany only

# VORSICHT!

Explosinsgefahr bei unsachgemäßen austausch der Batterie. Ersatz nur durch denselben oder einen vom hersteller empfohlenen ähnlichen typ. Entsorgung gebrauchter Batterien nach angaben des herstellers.

Denmark only

#### ADVARSEL!

Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering Udskiftning må kun ske med batteri af samme fabrikat og type. Levér det brugte batteri tilbage til leverandøren.

Norway only

#### **ADVARSEL**

Eksplosjonsfare ved feilaktig skifte av batteri. Benytt samme batteritype eller en tilsvarende type anbefalt av apparatfabrikanten. Brukte batterier kasseres i henhold til fabrikantens instruksjoner. Sweden only

#### **VARNING**

Explosionsfara vid felaktigt batteribyte.

Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren. Kassera använt batteri enligt fabrikantens instruktion.

Finland only

#### **VAROITUS**

Paristo voi räjähtää, los se on virheellisesti asennettu. Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä Käytetty paristo valmistajan ohjeiden mukaisesti.

**ALL Areas** 

#### **CAUTION**

"Replace only with the same or equivalent type recommended by the manufacturer.

Dispose of used IC Package according to the manufacturer's instructions."

Germany only

#### **VORSICHT!**

"Austausch nur durch denselben oder einen vom Hersteller empfohlenen, gleichwertigen typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers."

# **Table of contents**

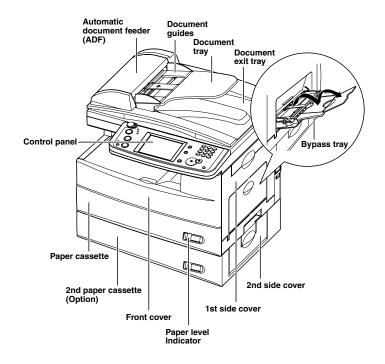
Safety Information	a
General Description	1_1
1.1 Product Description	
1.2 Specifications	
1.2 Specifications	1-2
Machine Composition	2-1
2.1 Document Scanning Sequence	
2.2 Recording Section	
2.3 Image Processing	
2.4 Interconnect Block Diagram	2-12
2.5 Main Control PCB	
2.6 Network Control Unit (NCU) PCB	
2.7 Power Supply Unit (PSU)	
2.8 Sensors	
2.9 Function detail and additional information	2-18
Adjustment Procedures	3-1
3.1 Field Service Program Modes	
3.2 Machine Parameter Adjustment	
3.3 Memory Switch Adjustment	
3.4 Setting Individual Autodialer Attributes	
3.5 All RAM Clear	
3.6 Clear Programmed Data / User Settings	
3.7 Unique Switch Adjustment	
3.8 T.30 Monitor	
3.9 Printer maintenance mode	
3.10 Monitor speaker	
3.11 Test Modes	
3.13 Factory Functions	3-115
3.14 Line Tests	
3.15 Mirror Carriage Transfer Mode	
3.16 Consumable order sheet	
3.17 DRAM Clear	3-131
3.18 Clear Life Monitor	
3.19 Clear Optional Data	
3.20 Set Service Code	
3.21 Life monitor maintenance	
3.22 Sensor input test	
3.23 Printer diagnostic mode	
3.25 Multi Line Settings	
3.26 Flash Rom Sum Check	
3.27 Printer registration adjustment	
3.28 Service Report	
3.29 Quick Initial settings	
3.30 Update the software via Network	3-162
3.31 Update the software	
3.32 Network Service functions (IP Address : 8000)	3-174
roubleshooting Procedures	4-1
4.1 Troubleshooting Outline	
4.2 Recording Paper Jam	
4.3 Document Feeder Jam	
4.4 Document Feeder Multi-feeding or Skew	
4.5 Mirror Carriage Error (MFX-2050/MFX-1450 only)	
4.6 Clearing Jammed Paper	4-3

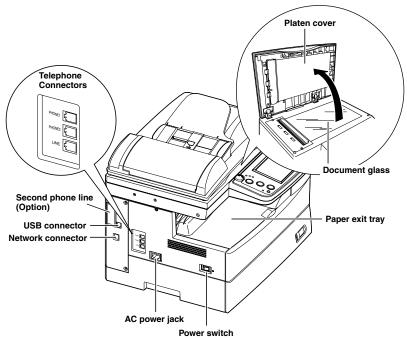
4.8 Transmit Error	4-7
4.9 LCD Error Messages	4-8
4.10 Error Codes	4-14
4.11 Service Call Error	4-17
4.12 The Image Quality Problems	
4.13 LCD Failure	
4.14 General Power Failure	
5 Maintenance & Adjustment	5-1
5.1 Maintenance schedule	5-2
5.2 Re/Disassemble	
5.3 Adjustment	5-70
6 Options	6-1
6.1 Memory Upgrade	6-1
6.2 Second paper cassette	6-3
6.3 Page Counter	6-5
6.4 PCL printer controller	6-7
6.5 Second phone line kit	6-8

# 1 General Description

# 1.1 Product Description

The MFX-2050, MFX-1450, F-565 and F-525 are Multi-function products with flat bed scanner (MFX-2050 and MFX-1450) and Group 3 and V.34 HDX modem facsimile machine. Documents are printed on plain paper using dry electrophotographic printing.





Note: F-565 and F-525 have no document glass.

# 1.2 Specifications

# **General specifications**

Item	MFX-2050/MFX-1450 F-565/F-525		
Туре	Desktop type		
Telephone network	PSTN (Public Switched Telephone Network) or equivalent.		
Compatibility	ITU-T T.4 and T.30		
Coding method	ITU-T-standard MH, MR, MMR and JBIG		
Modem speed	33600, 31200, 28800, 26400, 24000, 21600, 19200, 16800, 14400,		
	12000, 9600, 7200, 4800 and 2400 bps		
Dual Access	Allows up to three simultaneous operations.		
LCD	LCD: 320dots x 240dots.		
	Language: English, French, Spanish		
Scanning method	B/W and Color CCD		
Recording method	Dry electrophotographic (LED)		
Acceptable document size	<adf></adf>		
	Single sheet Two or more sheets		
	Max: 216 (W) x 900 (L) mm 216 (W) x 356 (L) mm		
	8.5 (W) x 35.4 (L) inches 8.5 (W) x 14.0 (L) inches		
	Min: 120 (W) x 100 (L) mm 216 (W) x 139.5m (L) mm		
	4.7 (W) x 25.4 (L) inches 8.5 (W) x 55.0 (L) inches		
	Paper weight: 35 – 128 g/m <sup>2</sup> 52 – 105 g/m <sup>2</sup>		
	Thickness: 0.05 – 0.15 mm 0.07 – 0.12 mm		
	<pre><fbs glass=""></fbs></pre>		
	Krb3 glass		
	8.5 (W) x 14.0 (L) inches		
	Min: No limit		
ADF capacity	Letter, Legal, Half-letter 80 sheets		
	Paper weight: 75.0 g/m <sup>2</sup>		
Scanning resolution	<transmission></transmission>		
_	horizontal x vertical (in dots/inch x in lines/inch)		
	Normal: 203 x 98		
	Fine: 203 x 196		
	Super fine: 406 x 392* or 600 × 600		
	Grayscale: 203 x 196		
	*: In the case that the remote fax has the ability of "406 x 392" or "600 x 600". If not, the superfine resolution is "203 x 392".		
	·		
	<copy>   600 x 300 dpi (600 x 600 dpi for ultra fine)</copy>		
	<pre><scanner (network)=""></scanner></pre>		
	100 dpi : 100 dpi x 100 lpi (Color scan only)		
	200 dpi : 200 dpi x 200 lpi		
	300 dpi : 300 dpi x 300 lpi		
	600 dpi : 600 dpi x 600 lpi		
Effective Scanning width	208 mm (Fax), 216 mm (Copy)		
Transmission speed	Under 3 seconds (Super G3)		
	Based on transmission of ITU-T Test Document 1 to a Muratec fax		
	machine.		
Document Memory	Standard: 7.8 MB (650 pages)		
	Upgrade option : plus 32MB (2720 pages)		
Document memory	(Total memory capacity: Backup time)		
backup	Standard 7.8 MB: 72 hours		
	Upgraded 39.8 MB : 24 hours The backup battery requires about 24 hours to reach full charge after		
	power to the fax unit is restored.		
Printing resolution	ļ ·		
Printing resolution	600 dpi		

Item	MFX-2050/MFX-	1450		F-565/F-525
Printing speed				
		MFX-205	50 / F-565	MFX-1450 / F-525
	Simplex printing	20	ppm	14 ppm
	Duplex printing	10	ppm	8 ppm
	(When loading Letter-siz	zed paper fr	om 1st pape	r cassette.)
Toner yield	Approx. 16,000 pages (Letter, 6 % document coverage under 2-pages interval printing.)		Approx. 15,000 pages (Letter, 4 % document coverage under 2-pages interval printing.)	
Drum yield	Approx. 30,000 pages (Letter under 2-pages interval printing.)		(Letter und printing.)	,000 pages er 2-pages interval
Print margin	Reading edge, Trailing e 0.12 ± 0.08 inch (3 ± 2		dge and Rigl	nt edge:
Acceptable recording paper	Simplex printing <paper cassette=""> Plain paper: Paper weight: <bypass tray=""> Plain paper:  Envelopes: Postcard: Transparency: Custom size: Length) (97 - 216 mm): Duplex printing Paper Cassette: Letter (SEF), Legal (SEBypass tray: Letter (SEF), Legal (SEBypass tray: Letter (SEF), Legal (SEB)</bypass></paper>	60 – 90g/m  Letter(SEF), A  Executive(S  DL(SEF), C  3.9 inch (W  Letter (SEF)  (3.8 – 8.5 in  x (140 – 356)	<sup>2</sup> , 20 – 24 lb ), Legal(SEF 5(LEF)(SEF SEF) COM10(SEF) ) x 5.8 inch (SEF) or A4 (SEF) nch) x (5.5 –	14 inch) (Width x
Recording paper capacity	<pre><paper cassette="">     1st cassette: 500 sheets     2nd cassette (option): 500 sheets <bypass tray="">     Plain paper: 50 sheet     Postcard/Transparency: 20 sheets     Envelopes 1 sheet</bypass></paper></pre>			
Receive paper tray capacity	Approx. 250 sheets			
Printouts exit	Face down			
Environmental conditions	Ambient temperature: 10 °C to 32 °C (50 °F to 89.6 °F)			
Power requirements	Relative humidity: 20 % to 80 % with no condensation 120 VAC ± 10% 50/60 Hz			
	* excluding projecting po	oint115 VAC	£ 10 %; 50/	60 Hz

Item	MFX-2050/MFX-14	150		F-565/F-525
Power				
consumption		MFX-205		MFX-1450 / F-525
	Energy save mode	15	W	15 W
	Standby		Wh	50 Wh
	Memory Transmission	37	W	36 W
	Reception	103	0 W	1030 W
	Copying	103	0 W	1030 W
	Maximum	104	0 W	1040 W
Dimensions	20.5 x 19.3 With optional cassette: 520		(W x D x H)	D x H)
		120 mm 446 mm	520 mm	
Weight	(48.7	ox. 21.8 Kg lbs)	Duplex mach	(44.8 lbs)
Optional products	Optional telephone handse     Second paper cassette     Upgrade memory     PCL printer controller     Mechanical page counter     Second phone line kit     Duplex print unit (Standard	et		,

# **PC Print**

# PC-Fax Basic Function

Item	Specifications / Comments
Configuration	Standard
Support for Local	yes, USB2.0 (Full Speed)
Support for Network	yes, 10/100Mbps (Auto Negotiation)
Support for Print Server	no
Data Format	MMR
# of User	yes, 128MB:100 / 256MB or higher :200
# of User Group	yes, 128MB:100 / 256MB or higher :200
Interface	
between Print Controller & MFP	Image Output : MMR
	Status : EFI
	Command : EFI
between Network I/F & Print Controller	EFI
Data Transfer Protocol	
Salutation	no
• HTTP	yes (with GDI)
• LPR	yes (with PCL option)
• Port9100	yes (with PCL option)
Port9100 SNMP	yes (with PCL option)
Port9100 PJL	yes (with PCL option)
• SMB	no
• AppleTalk	no
·IPP	no
• IPDS	no
Network Protocol	
NetBEUI (Windows 95/98/Me)	no
NetBIOS (Windows 95/98/Me)	no
TCP/IP (Windows NT)	yes
TCP/IP (UNIX)	no
IPX/SPX (Netware)	no
EtherTalk (Mac)	no
Status Monitor	no
DHCP Support	yes
Network Management	
SNMP-MIB	yes

# Print Language

Item	Specifications / Comments
GDI	yes (Standard)
PCL5e	yes (Option)
PCLxL	yes (Option)
PJL Command	yes
PS2	no
PS3	no

Print Capability (depends on the main unit)

Item	Specifications / Comments
Color Printing	
Color	no
Black & White	yes
GDI Coding Method	MMR
Data Resolution	
• 600 x 600dpi	yes (default)
• 400 x 400dpi	no
• 300 x 300dpi	yes
• 200 x 200dpi	no
Print Resolution	600 x 600 dpi
Print Resolution	600 x 600 dpi
Grayscale	GDI: 144 levels
a. ayooa.o	PCL: 256 levels
Print Speed (Simplex)	High: 20ppm / Low: 14ppm (Letter SEF)
(Duplex)	High: 10ppm / Low: 8ppm (Letter SEF)
Condition	Using Resident Font (in case of PCL)
Containen	<ul> <li>Picking Letter (SEF) paper from 1st cassette</li> </ul>
	• Original document (script.doc),
	• Client PC (CPU 2.26GHz ,RAM: 256MB, HDD:
	20GB
	Using OS: Windows XP
	<ul> <li>Application software: MS Word2000</li> </ul>
FPOT (Simplex)	15.02 Seconds (Room Temp. 23°)
Condition	Using Resident Font,
	<ul> <li>Picking Letter (SEF) paper from 1st cassette</li> </ul>
	Original document (script.doc),
	· Client PC (CPU 2.26GHz ,RAM: 256MB, HDD:
	20GB (
	Using OS: Windows XP
	<ul> <li>Application software: MS Word2000</li> </ul>
Print Alignment	Left Upper Corner
Print Size	
Simplex Printing	
(Cassette)	Letter(SEF), Legal(SEF), Half-Letter(LEF)
(Optional Cassette)	Letter(SEF), Legal(SEF), Half-Letter(LEF)
(Bypass Tray)	Letter(SEF), HalfLetter(LEF), Legal(SEF),
	Executive(SEF), A6(SEF), A5(LEF),
	A4(SEF), F4(SEF), DL(SEF), COM#10(SEF),
	Monarch(SEF), Postcard(SEF),
	Custom Size (width:3.82-8.50 inches,
Dunlay Drinting	length:5.51-14.01 inches)
Duplex Printing	(MFX2050/F565: Std, MFX1450/F525pm: Option)
(Cassette)	Letter(SEF), Legal(SEF)
(Optional Cassette)	Letter(SEF), Legal(SEF)
(Bypass Tray)	Letter(SEF), Legal(SEF), A4(SEF), F4(SEF)
Print Margin	Top/Bottom: 3±2mm
Danas Owent	Left/Right: 3±2mm
Paper Supply	Cassettes + Bypass
Recording paper capacity (Standard)	500sheets(Cassette) + 50sheets(Bypass Tray)
(Max.)	500sheets x 2(Cassette) + 50sheets(Bypass Tray)

# **Print Job Operation**

Item	Specifications / Comments
Online Key	yes (soft key on the Touch Screen)
Job Display/Management Method	Browser (GDI: yes, PCL: no)
Job Monitoring	yes (GDI: yes, PCL: no)
Document Name	yes
Status	no
• User Name	yes (Windows user name)
<ul> <li>User Group Name</li> </ul>	no
Print Date	yes
Job Cancel	yes
Job Order Change	no
Print counter tabulation by user group	yes (when "User Access/Cost Accounting" is ON)
Print counter tabulation by user	yes (when "User Access/Cost Accounting" is ON)

# Notice Function to Client PC

Item	Specifications / Comments
Print Complete Notice	
<ul> <li>Notice to the Client PC (IP Address)</li> </ul>	yes (InfoMonitor)
Notice to the User (User ID)	no

Printer Driver	
Item	Specifications / Comments
Paper Size Setting	yes
(Simplex Printing)	Letter(SEF), HalfLetter(LEF), Legal(SEF)
·	Executive(SEF), A6(SEF), A5(LEF)
	A4(SEF), F4(SEF), DL(SEF), COM#10(SEF)
	Monarch(SEF), Postcard(SEF)
	Custom Size (width: 3.82-8.50 inches, length:
	5.51-14.01 inches)
(Duplex Printing)	Letter(SEF), Legal(SEF), A4(SEF), F4(SEF)
	Default: Letter (SEF)
Custom Paper Setting	yes
Size Edit	yes, 50 patterns
• Name	20 characters
Short Edge	3.82-8.5 inches
· Long Edge	5.51-14.01 inches
• Unit	mm / inch (Default: inch)
Paper Supply Setting	yes, Auto/Cassette1/Cassette2/Bypass Tray
Paper Madia Setting	yes
apor madia county	Plain, Pasteboard/Label, OHP, Envelope/Postcard
Print Orientation (Portrait/Landscape)	yes, (Default: Portrait)
# of Prints setting	yes (1-999 copies, Default: 1 copy)
Prior Print Setting	no
Sort Print	yes, (Default: Off)
Reverse Order Print	no
Resolution	
• 600x600 dpi	yes
• 400x400 dpi	no
• 300x300 dpi	yes
• 200x200 dpi	no
Toner Density	yes (-50 to 50, Default : 0)
Toner Saving	yes, On/Off (Default: Off)
Preset Enlarge/Reduction	yes
1% zoom	yes, 25% - 400% (1% step)
Fit to Paper	yes
Jammed Page re-print	yes (controlled by main unit program)
Combine Print	yes(2-up/4-up/8-up)
Print Separator Line	yes
Page Location	yes
	(Left to Right /Right to Left/Up tp Down/Right, then
	Down/Left, then Down/Down, then Right/Down,
	then Left)
Repeat Print	no
Duplex Print	yes
Binding Position	yes, Upper/Left/Right
Binding Margin	yes, Front: 0.00-1.18 inches Back: 0.00-1.18 inch
Booklet Print	yes
Booklet Binding Position	Upper/Left/Right/Lower
2-bin Tray Setting	no
Shift Sort	no
Staple	no
Punch	no
Forced Print (Ignore paper size error)	no
Watermarks	GDI: no / PCL: yes (default: None)
Standard message	ves
•# of messages	11 messages
_	
Page initiate function	yes
	1st page only/All pages (Default: All pages)

Item	Specifications / Comments
Watermarks Edit	GDI: no / PCL: yes (default: None)
Watermarks List	yes
# of programming message in Watermarks List	l <sup>-</sup>
Add Watermarks to List	yes
Delete Watermarks from List	yes
Watermarks Edit function	yes
# of characters for Title	30 characters
# of characters of String	30 characters
• Shading	10%/25%/50%/75%/100% (Default: 25%)
• Style	Italic / Bold
Font setting	yes
Font type	Roman 80 fonts (Printer Regident Fonts)
Font Size	10 - 144 points (Default : 72 points)
• Angle	Horizontal/Vertical/Diagonal/User set
	Default: Diagonal
	from -180° to 180° (Default: 52°)
Position of Watermarks	Center / User Set
	Horizontal: from -10 to 10
	Vertical: from -10 to 10
Security Print	GDI: yes / PCL: no
• # of Users	128MB:50 / 256MB:100 /512MB:200
# of stored jobs per user	unlimited (due to memory capacity)
• Box Name	N/A
• I.D.Code	User Password
Document Hold Period     District Lab Colored	24 hours (deleted after 24 hours without notice)
• Print Job Select	no (all stored job will be printed together)
Print Job Delete  Attached action acting	yes (all jobs will be deleted together)
Attached option setting TrueType Mode	yes GDI: no / PCL: yes
True Type Wode	Automatic
	Download as Outline
	Download as Bitmap
	Download as Graphics (98/Me only)
	Default : Automatic
Graphics Mode	no
Print Driver Installation Setting	
P address direct setting	yes
• SMB	no
AppleTalk	no
• UPnP	no
Rendezvous	no
<ul> <li>Proprietary search (within same segment)</li> </ul>	yes
Proprietary search (Outside segment)	no
Print Driver Display Language	English
Specification of client PC	
Support PC, WorkStation	PC/AT compatible machine
Support OS	
Windows 95 (English) Ethernet Only	no
Windows 98 (English) Ethernet Only	yes
• Windows 98SE (English)	yes
• Windows Me (English)	yes
Windows NT4.0 (English) Ethernet Only     Windows NT4.0 (English) Ethernet Only	yes
Windows 2000 Professional (English)	yes
WindowsXP Home Edition/ Professional (English)	yes
Windows Server 2003 (English)	yes
Windows Vista (English)	yes

ltem	Specifications / Comments
• DOS	no
• Mac	no
• Linux	no
• Unix	no
CPU	Depends on the Operation System
Required Memory quantity	Depends on the Operation System
Required Disk Space for Driver Installation	10MB or higher
Others	
HP PJL Support	GDI: no / PCL: yes
Citrix	no
Microsoft Point and Print	no
WHQL Logo certified	GDI:no / PCL:yes
(XP/2003)	
Oracle	no
SAP	no
AS400	no

#### Printer Controller (PCL5e/XL)

Printer Controller (PCL5e/XL)	
Item	Specifications / Comments
Emulation	TBD
Text Print	Yes (Only Network Connection, Local Connection is not supported.)
Printer Setting	Yes (by Service Mode (Machine Parameter Set-
January State Stat	ting)
Paper	
Paper Size	Yes
	Letter, HalfLetter, Legal, Executive, A6, A5, A4,
	F4, DL, COM#10, Monarch, Postcard
December 7 and (Marylla)	(Default: A4)
• Paper Type (Media)	Yes
	Plain, Pasteboard/Label, OHP, Envelope/Postcard (Default: Plain)
Paper Source	yes
1 aper Source	Auto/Cassette1/Cassette2/Bypass Tray
	(Default: Auto)
Output Tray	no
Orientation	ves
	Portrait/Landscape
	(Default: Portrait)
Copies	yes
	1-999
	(Default: 1)
• Duplex	no
• Punch	no
• Staple	no
• Shit	no
Printer Setting	
• Page Protection	no
• Toner Saving	no
• Auto Continue	no
Time-out setting	no
I/O Time-Out setting	yes
Face Ochica Nica/Dacas	(Default: 300 sec.)
• Form Setting [Line/Pages]	no
Resolution	yes (Default: 600dpi)
PCL Font	(Derault. 000upi)
• Font Type	yes
1 on type	(Default: Mincho))
• Font Pitch	Yes
1 on 1 non	(Defalt: 10.0)
Font Size	yes
	(Default: 12.0)
Symbol Set	yes
	(Default: Windows 3.1j Latin)
Test Print	
Demo Page	no
Printer Configuration	no
Font List	no
Printer Resident Font	yes
	Roman 80 fonts

# Local Print Function

Item	Specifications / Comments
Print On Demand	
File Format	
TIFF-S/F	yes
PDF	yes (created by machine itself)
Protocol	SMB Client
Available Function	
Сору	yes (1-99)
Sort	yes
Cassette Selection	yes
Print OB Document	
Select document to print	yes, from User Box / Bulletin Board
File Format	no
Available Function	
Сору	yes (1-99)
Sort	yes
Cassette Selection	yes

# PC-Fax

# PC-Fax Basic Function

Item	Specifications / Comments
Configuration	Standard
Network Interface	yes10/100Mbps(Auto Negotiation)
Communication Protocol	HTTP
Data Format	TIFF-S, TIFF-F
# of User	yes, 128MB:50 / 256MB:100 /512MB:200
# of User Group	yes, 128MB:50 / 256MB:100 /512MB:200

# Communication Capability

Item	Specifications / Comments
Document Size	A3/B4/A4
Coding Method	MH/MR/MMR/JBIG
Communication Standard	V.34
Transmission Speed	Max. 33.6Kbps
Resolution	
• 8 dpm x 3.85 lpm (200x100 dpi)	no
• 8 dpm x 7.7 lpm (200x200 dpi)	yes
• 16 dpm x 15.4 lpm (400x400 dpi)	yes
• 600 x 600 dpi	yes
Halftone (Fax Driver)	256 levels (Dither Matrix)
	8 dpm x 7.7 lpm(200 x 200 dpi)

# Transmission Function

Direct Tx from applications Tx by Client User Tx command file # of Tx reservation command Broadcast Tx Max. # of destinations  Group Tx Max. # of group  Fax/E-mail mixed Tx Salutation Fax Tx Destination specifying method Destination specifying me	
Tx by Client User Tx command file # of Tx reservation command Broadcast Tx  Max. # of destinations  Group Tx  Max. # of group  Group Tx  Max. # of group  Fax/E-mail mixed Tx  Destination specifying method  # of Lines # of Lines PC-Fax Tx Details Tx dialog method Destination specifying method  • Direct Input • Select by LDAP search Operation for the Tx document Document select from user box Document select from network folder • SMB protocol (Windows) • NFS(Linux)  Max. # of group  128MB: 100 256MB: 150 512MB: 200  Fax/E-mail mixed Tx yes  128MB: 100 256MB: 150 512MB: 200  Fax/E-mail mixed Tx yes  128MB: 100 256MB: 150 512MB: 200  Fax/E-mail mixed Tx yes  128MB: 100 256MB: 150 512MB: 200  Fax/E-mail mixed Tx yes  128MB: 100 256MB: 150 512MB: 200  Fax/E-mail mixed Tx yes  128MB: 100 256MB: 150 512MB: 200  Fax/E-mail mixed Tx yes  128MB: 100 256MB: 150 512MB: 200  Fax/E-mail mixed Tx yes  128MB: 100 256MB: 150 512MB: 200  Fax/E-mail mixed Tx yes  128MB: 100 256MB: 150 512MB: 200  Fax/E-mail mixed Tx yes  128MB: 100 256MB: 150 512MB: 200  Fax/E-mail mixed Tx yes  128MB: 100 256MB: 150 512MB: 200  Fax/E-mail mixed Tx yes  128MB: 100 256MB: 150 512MB: 200  Fax/E-mail mixed Tx yes  128MB: 100 256MB: 150 512MB: 200  Fax/E-mail mixed Tx yes  128MB: 100 256MB: 150 512MB: 200  Fax/E-mail mixed Tx yes  128MB: 100 256MB: 150 512MB: 200  Fax/E-mail mixed Tx yes  128MB: 100 256MB: 150 512MB: 2030  Add/ressBook+Direct Input)  128MB: 1030 128MB: 100 1	
Tx command file # of Tx reservation command Broadcast Tx  Max. # of destinations  Group Tx  Max. # of group  Group Tx  Max. # of group  Fax/E-mail mixed Tx  Destination specifying method  Wulti Line # of Lines  PC-Fax Tx Details Tx dialog method Destination specifying method  • Direct Input • Select by Address Book • Select by LDAP search Operation for the Tx document bocument select from User box Document select from network folder • SMB protocol (Windows) • NFS(Linux)  Max. # of group  128MB: 100 256MB: 150 512MB: 200 256MB: 150 512MB: 200  Pess Salutation Fax Tx  no no  No  Browser  Select by LDAP search Operation for the Tx document Document select from User box Document select from network folder • SMB protocol (Windows) • NFS(Linux)	
# of Tx reservation command Broadcast Tx  Max. # of destinations  128MB: 1030 (AddressBook+Direct Input) 256MB: 1530 (AddressBook+Direct Input) 512MB: 2030 (AddressBook+Direct Input) 512MB: 2030 (AddressBook+Direct Input)  Group Tx  Max. # of group  128MB: 100 256MB: 150 512MB: 200  Fax/E-mail mixed Tx  yes  Salutation Fax Tx  Destination specifying method  Multi Line # of Lines  PC-Fax Tx Details  Tx dialog method Destination specifying method  Destination specifying method  Direct Input Select by Address Book Select by LDAP search Operation for the Tx document Document select from User box Document select from network folder SMB protocol (Windows) NFS(Linux)  100 commands yes 128MB: 1030 (AddressBook+Direct Input) 125MB: 2030 (AddressBook+Direct Input) 126MB: 1530 (AddressBook+Direct Input) 126MB: 1030 (AddressBook+Direct Input) 126MB: 1030 (AddressBook+Direct Input) 126MB: 1030 (AddressBook+Direct Input) 128MB: 1030 (AddressBook	
Broadcast Tx  Max. # of destinations  128MB: 1030 (AddressBook+Direct Input) 256MB: 1530 (AddressBook+Direct Input) 512MB: 2030 (AddressBook+Direct Input) 512MB: 2030 (AddressBook+Direct Input)  Group Tx  Max. # of group  128MB: 100 256MB: 150 512MB: 200  Fax/E-mail mixed Tx  yes  Salutation Fax Tx  no Destination specifying method  Multi Line # of Lines  PC-Fax Tx Details  Tx dialog method Destination specifying method  Destination specifying method  Destination specifying method  Destination specifying method  Destination specifying method  Destination specifying method  Destination specifying method  Destination specifying method  Destination specifying method  Destination specifying method  Destination specifying method  Add/Delete/Order Change  Document select from User box Document select from network folder  SMB protocol (Windows)  NFS(Linux)  Document select from network folder  SMB protocol (Windows)  NFS(Linux)	
Max. # of destinations  128MB: 1030 (AddressBook+Direct Input) 256MB: 1530 (AddressBook+Direct Input) 512MB: 2030 (AddressBook+Direct Input) 512MB: 2030 (AddressBook+Direct Input)  Group Tx  Max. # of group  128MB: 100 256MB: 150 512MB: 200  Fax/E-mail mixed Tx  yes  Salutation Fax Tx  Destination specifying method  Multi Line # of Lines  PC-Fax Tx Details  Tx dialog method Destination specifying method  • Direct Input • Select by Address Book • Select by LDAP search Operation for the Tx document Document select from User box Document select from network folder • SMB protocol (Windows) • NFS(Linux)  128MB: 1030 (AddressBook+Direct Input)  yes  128MB: 100 256MB: 150 512MB: 200  Fax/E-mail mixed Tx  po  po  po  po  po  po  po  po  po  p	
256MB: 1530 (AddressBook+Direct Input) 512MB: 2030 (AddressBook+Direct Input)  Group Tx  Max. # of group  128MB: 100 256MB: 150 512MB: 200  Fax/E-mail mixed Tx  yes  Salutation Fax Tx  Destination specifying method  Multi Line # of Lines  PC-Fax Tx Details  Tx dialog method Destination specifying method  Destination specifying method  Destination specifying method  Destination specifying method  Destination specifying method  Destination specifying method  Select by Address Book Select by LDAP search Operation for the Tx document Document select from User box Document select from network folder  SMB protocol (Windows)  NFS(Linux)  OddressBook+Direct Input yes  (AddressBook+Direct Input)  yes  (Max. 30)  (AddressBook+Direct Input)  yes  (MadressBook+Direct Input)  yes  (Max. 30)  yes (Max. 30)  Add/Delete/Order Change yes  no  NFS(Linux)  NFS(Linux)	
Group Tx Max. # of group  Fax/E-mail mixed Tx Salutation Fax Tx Destination specifying method  Multi Line # of Lines  PC-Fax Tx Details  Tx dialog method Destination specifying method  • Direct Input • Select by Address Book • Select by LDAP search Document select from User box Document select from network folder • SMB protocol (Windows) • NFS(Linux)  Dash 300 (AddressBook+Direct Input) yes yes 128MB: 100 256MB: 150 512MB: 200 Pes 128MB: 100 256MB: 150 128MB: 200 Pes 128MB: 100 256MB: 100 256MB: 150 128MB: 200 Pes 128MB: 2030 (AddressBook+Direct Input) yes 128MB: 100 256MB: 150 128MB: 200 Pes 128MB: 2030 (AddressBook+Direct Input) Pes 128MB: 100 256MB: 100 256MB: 150 128MB: 200 Pes 128MB: 200 Pes 128MB: 100 256MB: 150 128MB: 100 256MB: 150 128MB: 200 Pes 128MB: 100 256MB: 150 128MB: 200 Pes 128MB: 100 256MB: 150 128MB: 200 Pes 128MB: 100 256MB: 150 Pes 128MB: 100 Pes 12	
Group Tx Max. # of group  128MB: 100 256MB: 150 512MB: 200  Fax/E-mail mixed Tx  Salutation Fax Tx Destination specifying method  Multi Line # of Lines  PC-Fax Tx Details Tx dialog method Destination specifying method Destination specifying method Destination specifying method Destination specifying method Select by Address Book Select by LDAP search Operation for the Tx document Document select from User box Document select from network folder SMB protocol (Windows) NFS(Linux)  yes  yes  128MB: 100 256MB: 150 512MB: 200  Pos  yes  (no  yes (max. 30) yes (1000 / max. 2000 with 512MB CF) yes (Max.30) Add/Delete/Order Change yes no no	
Max. # of group  128MB: 100 256MB: 150 512MB: 200  Fax/E-mail mixed Tx  Salutation Fax Tx  Destination specifying method  Multi Line # of Lines  PC-Fax Tx Details Tx dialog method Destination specifying method Select by Address Book Select by LDAP search Operation for the Tx document Document select from User box Document select from network folder SMB protocol (Windows) NFS(Linux)  128MB: 100 256MB: 150 512MB: 200  Nes Select yes Select yes Select yes Select yes Select by Address Select yes	
256MB: 150 512MB: 200  Fax/E-mail mixed Tx  Salutation Fax Tx  Destination specifying method  Multi Line  # of Lines  PC-Fax Tx Details  Tx dialog method Destination specifying method  Destination specifying method  Destination specifying method  Select by Address Book Select by LDAP search Operation for the Tx document Document select from User box Document select from network folder  SMB protocol (Windows) NFS(Linux)  yes  1000 / max. 2000 with 512MB CF) yes (Max.30) Add/Delete/Order Change yes no	
Fax/E-mail mixed Tx  Salutation Fax Tx Destination specifying method Multi Line # of Lines PC-Fax Tx Details Tx dialog method Destination specifying method  • Direct Input • Select by Address Book • Select by LDAP search Operation for the Tx document Document select from User box Document select from network folder • SMB protocol (Windows) • NFS(Linux)  yes no no  Browser  Browser  Browser  Browser  Add/Delete/Order Change yes (Max.30) Add/Delete/Order Change yes no	
Fax/E-mail mixed Tx Salutation Fax Tx Destination specifying method Multi Line # of Lines PC-Fax Tx Details Tx dialog method Destination specifying method Select by Address Book Select by LDAP search Document for the Tx document Document select from User box Document select from network folder SMB protocol (Windows) NFS(Linux)  No	
Salutation Fax Tx Destination specifying method Multi Line # of Lines PC-Fax Tx Details Tx dialog method Destination specifying method Destination specifying method Destination specifying method Destination specifying method Select by Address Book Select by LDAP search Operation for the Tx document Document select from User box Document select from network folder SMB protocol (Windows) NFS(Linux)  No	
Destination specifying method  Multi Line # of Lines  PC-Fax Tx Details Tx dialog method Destination specifying specifying specifying specifying specifying	
Multi Line # of Lines  PC-Fax Tx Details Tx dialog method Destination specifying method Direct Input Select by Address Book Select by LDAP search Operation for the Tx document Document select from User box Document select from network folder SMB protocol (Windows) NFS(Linux)  Proves  Browser  Browser  yes (max. 30) yes (1000 / max. 2000 with 512MB CF) yes (Max.30) Add/Delete/Order Change yes no no	
# of Lines  PC-Fax Tx Details  Tx dialog method Destination specifying method Destination specif	
PC-Fax Tx Details     Tx dialog method     Destination specifying method     Direct Input     Select by Address Book     Select by LDAP search     Operation for the Tx document     Document select from User box     Document select from network folder     SMB protocol (Windows)     NFS(Linux)  Browser  yes (max. 30)  yes (1000 / max. 2000 with 512MB CF)  yes (Max.30)  Add/Delete/Order Change yes  no  no	
Tx dialog method Destination specifying method Direct Input Select by Address Book Select by LDAP search Operation for the Tx document Document select from User box Document select from network folder SMB protocol (Windows) NFS(Linux)  Browser  yes (max. 30) yes (1000 / max. 2000 with 512MB CF) yes (Max.30) Add/Delete/Order Change yes no no	
Destination specifying method  Direct Input Select by Address Book Select by LDAP search Operation for the Tx document Document select from User box Document select from network folder SMB protocol (Windows) NFS(Linux)  Direct Input  yes (max. 30) yes (1000 / max. 2000 with 512MB CF) yes (Max.30) Add/Delete/Order Change yes no no	
<ul> <li>Direct Input</li> <li>Select by Address Book</li> <li>Select by LDAP search</li> <li>Operation for the Tx document</li> <li>Document select from User box</li> <li>Document select from network folder</li> <li>SMB protocol (Windows)</li> <li>NFS(Linux)</li> <li>yes (max. 30)</li> <li>yes (Max.30)</li> <li>Add/Delete/Order Change</li> <li>yes</li> <li>no</li> <li>no</li> <li>no</li> </ul>	
<ul> <li>Select by Address Book</li> <li>Select by LDAP search</li> <li>Operation for the Tx document</li> <li>Document select from User box</li> <li>Document select from network folder</li> <li>SMB protocol (Windows)</li> <li>NFS(Linux)</li> <li>yes (1000 / max. 2000 with 512MB CF)</li> <li>yes (Max.30)</li> <li>Add/Delete/Order Change</li> <li>yes</li> <li>no</li> <li>no</li> <li>no</li> </ul>	
Select by LDAP search     Operation for the Tx document     Document select from User box     Document select from network folder     SMB protocol (Windows)     NFS(Linux)      Select by LDAP search     yes (Max.30)     Add/Delete/Order Change     yes     no     no     no	
Operation for the Tx document Document select from User box Document select from network folder  • SMB protocol (Windows)  • NFS(Linux)  Add/Delete/Order Change yes no no	
Document select from User box Document select from network folder  • SMB protocol (Windows)  • NFS(Linux)  yes  no  no	
Document select from User box Document select from network folder  • SMB protocol (Windows)  • NFS(Linux)  yes  no  no	
SMB protocol (Windows)     NFS(Linux)	
• NFS(Linux) no	
· · ·	
· · ·	
Tx Document Preview yes	
CoverPage Edit yes	
Tx to User yes (with Fax or I-Fax Tx)	
Delete document after Tx yes (network documents cannnot be deleted.)	)
Tx Priority Setting no	
Communication Options	
• F-Code Tx (ITU-T) yes	
ITU-T SubAddress 20 characters (0-9, #, *)	
ITU-T Password 20 characters (0-9, #, *)	
• Delayed Tx	
Max Delayed Time 31 days	
• TTI Select yes	
• Tx Line Select	

Reception Function	
Item	Specifications / Comments
Received Fax Routing	yes, only from browser
Routing Table	
All Received Fax	yes
Routing Conditions	yes, # of tables: 100
TSI	yes
<ul> <li>TSI Partial Match (ex. 075*)</li> </ul>	yes (forward match)
<ul> <li>TSI Multiple Match (OR)</li> </ul>	yes, 25 characters x 5
CallerID	yes
<ul> <li>CallerID Partial Match (ex. 001*)</li> </ul>	yes (forward match)
<ul> <li>CallerID Multiple Match (OR)</li> </ul>	25 characters x 5
Number Display	no
ND Partial Match (ex. 075*)	N/A
ND Multiple Match (OR)	N/A
ITU-T Subaddress/Password	yes
<ul> <li>Sub-Address Multiple Match (OR)</li> </ul>	no
Select from Address Book	no
Rx Line	yes
And/OR setting of routing conditions	yes
Routing Destination	
User	
• # of User	128MB: 50 / 256MB:100 / 512MB:200
	(when multiple accesses are executed at the same
	time, the access speed may down.)
• # of User Group	128MB: 50 / 256MB:100 / 512MB:200
	(when multiple accesses are executed at the same
_	time, the access speed may down.)
Fax	
Select by Address Book	yes
• Direct Input	40 characters x 30
• Select by LDAP search	yes (Max. 30)
E-mail	
Select by Address Book	yes
• Direct Input	50 characters x 30
• Select by LDAP search	yes (Max. 30)
Attached File Format	TIFF-S/TIFF-F/PDF
Network Folder	
Select from Short-cut     Direct leavet	yes
• Direct Input	yes
• Routing Protocol	l <sub>vee</sub>
SMB (Windows)	yes
NFS (Linux)	no
AppleShare (Mac)	no
FTP	
• Direct Input	no
Select from Short-cut	no

	0 10 10
Item	Specifications / Comments
Enhanced Routing Destinations (exclusive setting)	
Shard Rx Box	yes
Bulletin Board	yes
• Sender	yes
• Doc. Info.	yes
• Subject	yes
Comments	yes
<ul> <li>Posting Time</li> </ul>	yes
Circulation	no
• Sender	
Receiver	
• Doc. Info.	
• Subject	
Comments	
Hold Time	
Processing	no
• Sender	
• Receiver	
• Doc. Info.	
• Subject	
Comments	
• Deadline	
Setting for Routing setting activate period	
	yes
<ul> <li>Start Time (Mon/Day, day of week, Time)</li> </ul>	yes
<ul> <li>End Time (Mon/Day, day of week, Time)</li> </ul>	yes
Repeat Setting	yes
Routing and Print	yes
Routing setting from MFP Control Panel	
Forced Print of distributed documents	no
Suspend of distribution (by record)	no
Suspend of distribution (All records)	no
Exceptional Distribution	no (included in the regular routing record)

# Notice function to Client PC

Item	Specifications / Comments
Tx completion Notice	yes (InfoMonitor)
Rx Notice (to Recipient)	yes (InfoMonitor)
Rx Notice (to Sender)	no
Delivery Notice (to Sender)	no

# Cover Page

Oovon rago	
Item	Specifications / Comments
CoverPage Tx	yes
CoverPage Templete	Shared
Stored location of CoverPage	in OB board/Client PC
# of Templates	5 types/128MB
	10 types/256MB
	20 types/512MB
Edit CoverPage	yes (with CoverPage Editor)
Insert Title	yes, 80 characters
Insert Message	yes, 1024 characters
Insert Destination Information	yes
Insert Sender's Information	yes
Sender's Information	
Name	yes (using User Info)
Company Name	yes (using User Info)
Department Name	no
Zip Code	no
Address 1	no
Address 2	no
Mail Address	yes (using User Info)
Tel	no
Fax	yes (using User Info)
Sub-Address	no
Password	no
Salutation ID	no

#### Communication Log

Communication Log	
ltem	Specifications / Comments
Communication Log control	Shared with the main unit's log
Communication Log display	yes (Control panel/Browser)
Items on the Communication Log	
Destinations	yes
• # of Pages	yes
Communication Mode	yes
Airtime of Communication	yes
Executed Time/Date	yes
• User	yes
Result	yes
Details	
Error Details	yes
• E-mail Tx Log	Tx Complete / Tx Failed / Tx in Process / Tx Can-
	celled
• E-mail Rx Log	Rx Completed / Forward Denied / Rx Railed / Con-
	nect Failed / Server not Found / Auth Failed
• Fax Tx Log	Completed / Waiting / In Process / Waiting for set
Conver Decemens	time / Cancelled / Terminated Forcibly / Error
Server Response Broadcast Destinations	yes
Tx Confirmation Detail	yes
	yes
Communication Log auto print	yes
Communication Log manual print	yes (Control panel/Browser)
Tabulation of Comm. Log by user group	no
Tabulation of Comm. Log by user	no
Storage of past Comm. Log	yes, by Archiving Function
File download of Comm. Log	yes, only CSV format
Auto e-mail sending of Comm. Log	no

# Communication Job Control

Item	Specifications / Comments
Tx Job Display (initiated at main unit)	yes (Control panel/Browser)
PC-Fax Job Display	yes (Control panel/Browser)
Job display by user	yes (Browser)
Job Cancel (initiated at main unit)	yes (Control panel/Browser)
PC-Fax Job Cancel (by job)	yes (Control panel/Browser)
PC-Fax Job Cancel (by destination)	yes (Control panel/Browser)
Job order change	no

# Fax Driver

	0 10 10
Item	Specifications / Comments
Fax Driver	
Document size	A3, B4, A4, A5, B5, A6, F4, Post Card, Letter, H-Letter, Legal, Ledger, Executive, DL, COM10, Monarch
Document Orientation	yes (X / Y)
Zoom	yes (50-200%)
Paper size specification	yes (30-200 %)
• paper size	A3, B4, A4, A5, B5, A6, F4,Post Card, Letter,
ράρει 3126	H-Letter, Legal, Ledger, Executive, DL, COM10, Monarch
Fit to Page	yes
Resolution	
• 8 dpm × 3.85 lpm (200x100 dpi	no
• 8 dpm × 7.7 lpm (200x200 dpi	yes
• 16 dpm × 15.4 lpm (400x400 dpi	yes
• 600x600 dpi	yes
Coding Method	MMR
Halftone (Fax Driver)	144 Levels (Dither Matrix)
, ,	8 dpm x 7.7 lpm (200 x 200 dpi)
Print to File on the local folder	yes: TiffMaker
Fax Driver OS support	
Windows 95 (English)	no
<ul> <li>Windows 98 (English version)</li> </ul>	yes
Windows 98 SE (English)	yes
Windows Me (English)	yes
<ul> <li>Windows NT 4.0 (English)</li> </ul>	yes
<ul> <li>Windows 2000 Professional (English)</li> </ul>	yes
<ul> <li>Windows XP Home Edition/Proffesional (English)</li> </ul>	yes
Windows Server 2003 (English)	no
Windows Vista (English)	yes
• MacOS	no
• Linux	no
·UNIX	no

# Report

Item	Specifications / Comments
PC-Fax Tx Check Message	yes
<ul> <li>Tx Job Info. (Destination/Day&amp;Time/Result)</li> </ul>	yes
Tx Document Attach	yes
PC-Fax TCR List Print	yes
<ul> <li>Tx Job Info. (Destination/Day&amp;Time/Result)</li> </ul>	yes
<ul> <li>Tx Document Attach (100%/Reduced)</li> </ul>	yes
Rx Document Routing Error Report	no (The distributed document itself will be printed out)

# Network Scan, Scan to E-mail

# Network Scan Basic Function

Item	Specifications / Comments
	Standard Standard
Configuration	
Support for Network	yes10/100Mbps(Auto Negotiation)
Data Transfer Protocol	SMB/FTP/SMTP
Data Format	TIFF/PDF/JPEG
# of User	yes, 128MB:50 / 256MB:100 /512MB:200
# of User Group	yes, 128MB:50 / 256MB:100 /512MB:200
Specification of client PC	
Support PC, WorkStation	PC/AT compatible machine
Support OS	
• Windows 95 (English)	no
<ul> <li>Windows 98 (English version)</li> </ul>	yes
<ul> <li>Windows 98 SE (English version)</li> </ul>	yes
<ul> <li>Windows Me (English version)</li> </ul>	yes
<ul> <li>Windows NT 4.0 (English version)</li> </ul>	yes
<ul> <li>Windows 2000 Professional (English)</li> </ul>	yes
Windows XP Home Edition / Professional (English)	yes
Windows Server 2003 (English)	no
Windows Vista (English)	yes
• MacOS	no
• Linux	no
• UNIX	no
CPU	Depends on the Operation System
Required Memory quantity	Depends on the Operation System
Required Disk Space for Driver Installation	10MB or higher

Scan Capability (depends on the main unit)

Scan Capability (depends on the main unit)	
Item	Specifications / Comments
Scan Starting	Control Panel
B/W Scan	yes
Color Scan	yes
Coding Method	
• MH	no
• MR	no
• MMR	yes (B/W)
• JBIG	no
• JPEG	yes (Color)
• BMP	no
• PNG	no
• Exif	no
• RGB	no
Resolution (Color)	
• 600 x 600 dpi	yes
• 400 x 400 dpi	no
• 300 x 300 dpi	yes
• 200 x 200 dpi	yes
• 100 x 100 dpi	yes (default)
Resolution (B/W)	
• 600 x 600 dpi	yes
• 400 x 400 dpi	no
• 300 x 300 dpi	yes
• 200 x 200 dpi	yes (default)
Halftone	256 levels (Error Diffusion)
Scanning Speed (Color)	(available in Scan to E-mail/Folder/FTP)
- 600 dpi	112.37 sec/page (Letter(SEF))
- 400 dpi	N/A
- 300 dpi	34.74 sec/page (Letter(SEF))
- 200 dpi	12.85 sec/page (Letter(SEF))
- 100 dpi	7.84 sec/page (Letter(SEF))
Scanning Speed (B/W)	
- 600 dpi	ADF:7.6 sec/page, FBS:7.0 sec.page (Letter(SEF))
- 400 dpi (ITU-T #1 chart)	N/A
- 300 dpi (ITU-T #1 chart)	ADF:5.1 sec/page, FBS:4.1 sec.page (Letter(SEF))
- 200 dpi (ITU-T #1 chart)	ADF:4.1 sec/page, FBS:3.1 sec.page (Letter(SEF))
Preset Enlarge/Reduction	yes(Black&White Only)
1% zoom	yes, MFP:50% - 200% (1% step), PPF:50% -
	100% (1% step)
1% zoom	yes, MFP:75% - 200% (1% step), PPF:75% -
	100% (1% step)
Document Type	Auto/Text&Photo/Photo/Background (B/W)
Effective Scanning Width	
• A4 / Letter	216 mm (Letter)
• 84	no
• A3 / Ledger	no
Scan Size	Letter, Legal, H-Letter
Contrast	
• Auto	no
Manual	yes (5 levels) (Black&White Only)
Background color correction	no

#### Data Transfer Method

Data Transier Method	
Item	Specifications / Comments
Color Scan	
• TWAIN	no (available only in local connection)
HTTP Download (of User Document)	no
Scan to Folder	yes(PDF/JPEG)
Scan to FTP	yes(PDF/JPEG)
Scan to E-mail	yes(PDF/JPEG)
Scan to User	no
<ul> <li>WIA (Windows Image Acquisition) WinMe/XP</li> </ul>	no
B/W Scan	
• TWAIN	no
HTTP Download (of User Document)	yes
Scan to Folder	yes(TIFF/PDF)
Scan to FTP	yes(TIFF/PDF)
Scan to E-mail	yes(TIFF/PDF)
Scan to User	yes(TIFF/PDF)
WIA (Windows Image Acquisition) WinMe/XP	no

#### Scan Advanced Functions

Scan Advanced Functions	
ltem	Specifications / Comments
Scan specified area	no
Scan Document Preview	no
Duplex Scan	no
Manual Duplex Scan	yes
Batch Scan	
• ON (1 stuck -> 1 file)	yes (default)
OFF(1 page -> 1 file)	yes
<ul> <li>Sheet Mode (1 sheet -&gt; 1 file)</li> </ul>	no
Destinations	
Scan to E-mail	Select from AddressBook
	Direct address input
	Select from E-mail history
	LDAP search
Scan to Folder	Select from Folder Shortcut
	Browse
Once to ETD	(max. 5 destinations at 1 job) Select from FTP Shortcut
• Scan to FTP	Direct link input
	(max. 5 destinations at 1 job)
• Scan to OB User	Select from OB Users
Scan to Bulletin Board	yes
Scan to Circulation	no
Scan to Processing	no
Broadcast	ves
	(not available to broadcast to FTP destinations
	with E-mail, Folder or User)
Fax&Copy&Scan	no
E-mail Edit (Scan to E-mail)	ile ile
• Subject	yes, up to 80 characters
• Text	yes, up to 1024 characters
Select from Templates	yes (# of templates: 10)
File Name Setting	yee (ii or templatee: 10)
(Scan to E-mail/Folder/FTP)	
• Auto	yes, YYYYMMDDHHMMSS
• Manual	yes, up to 100 characters
• Select	yes (# of prefixed name: 10)
Attachment Files	yes
(Scan to E-mail/Folder/FTP)	
• # of Attachments	max. 10
Means of attachment	Browse
	Select from Folder Shortcut
Category Setting (Scan to Bulletin Board)	
• Manual	yes, up to 20 characters
• Select	yes (# of prefixed type: 10)
Subject Setting (Scan to Bulletin Board)	yes, 80 characters
Post Time Setting (Scan to Bulletin Board)	yes, 1-99 days
Comments Setting (Scan to Bulletin Board)	yes, 1024 characters
Hold Time Setting (Scan to Circulation)	no
Deadline Setting (Scan to Processing)	no
Scan counter tabulation by user group	yes
Scan counter tabulation by user	yes
	IV.

Item	Specifications / Comments
Scan to Print Function	yes
Method	
Agent S/W	yes (Scan to Print Monitor)
• DPS (PictBridge)	no
· PCL/PS	no
Recommended Printer	
- Printer Shortcut Registration	5
Scan Settings	
- # of copies	yes
- Resolution	yes
- Scan Size	yes
- Zoom	no
- Sort	yes

# Notice Function to Client PC

Item	Specifications / Comments
Scan to User Complete Notice	yes (InfoMonitor)
Scanned Doc. to User Auto Download Notice	yes (Download Manager)

# **Internet Fax**

# I-Fax Basic Function

I-I ax basic i dilction	
Item	Specifications / Comments
Configuration	Standard
Support for Network	yes10/100Mbps(Auto Negotiation)
Data Format	MMR
# of User	yes, 128MB:50 / 256MB:100 /512MB:200
# of User Group	yes, 128MB:50 / 256MB:100 /512MB:200
Transmission Protocol	SMTP/ESMTP
Reception Protocol	SMTP/POP3
Transfer Speed	Max. 100Mbps
Encoding	MIME/Base64
Document Size	A3/B4/A4 (only A4 from the main unit)
Communication Standard	ITU-T T.37
Simple Mode	yes
• Full Mode	yes
Multi Account	no
Resolution	8dpm x 3.85lpm (200 x 100 dpi)
	8dpm x 7.7lpm (200 x 200 dpi)
	16dpm x 15.4lpm (400 x 400 dpi)
	600 x 600 dpi
Coding Method	
·MH	yes
• MR	yes
• MMR	yes
• JBIG	yes
• JPEG	no
File Format	
TIFF-FX Support	
<ul> <li>Profile-S(A4/MH/200dpi)</li> </ul>	yes
<ul> <li>Profile-F(A3/MMR/600dpi)</li> </ul>	yes
<ul> <li>Profile-J(A3/JBIG/600dpi)</li> </ul>	yes
<ul> <li>Profile-C(A3/JPEG/600dpi)</li> </ul>	no
PDF Support	
Image base (BW MMR)	yes
Image base (C JPEG)	no
Character Base	no

I-Fax Transmission Function

I-Fax Transmission Function	
Item	Specifications / Comments
Tx from Application	yes (with Fax Driver)
Tx of OB Documents after log-in	yes
I-Fax Tx Command File	Shared with the main unit command
# of Tx Reservation	100
Broadcast	yes
Max # of broadcasting destinations	128MB: 1030 (AddressBook+Direct Input)
	256MB: 1530 (AddressBook+Direct Input)
	512MB: 2030 (AddressBook+Direct Input)
One-Time Broadcast Tx	no
Group Tx	yes
• # of Groups	128MB: 100
	256MB: 150
	512MB: 200
Security Tx	no
• S/MIME	no
• PGP/MIME	no
E-mail to Fax relay initiation Tx	
Original Method (Fax=XXX@XXX)	no
Proprietary method initiation	yes (Body text manual edit)
E-mail Gateway Function	yes (prefix: yes / suffix: yes)
- Lightning Fax	yes
- RightFax	yes
- Dialing Options Convert	yes, Pause/Tone/Flash (service mode)
Direct SMTP Tx / Enter the IP address	yes
Dynamic DNS Support	no
SIP Support	no
Re-rout Tx	no
Fax/E-mail mixed Tx	yes
Duplex Scan	no
Manual Duplex Scan	no
Batch Scan	
• ON (1 stuck -> 1 file)	yes (default)
OFF(1 page -> 1 file)	yes
<ul> <li>Sheet Mode (1 sheet -&gt; 1 file)</li> </ul>	no
E-mail resend	yes
SMTP Authentication	yes
Authentication Format	LOGIN, PLAIN, CRAM-MD5
I-Fax Tx Details (by Tx dialog)	
Tx Dialog Method	Browser
Destination specifying method	
Direct Input	yes (max. 30)
Select by Address Book	yes (1000 / max. 2000 with 512MB CF)
• Select by LDAP search	yes (Max. 30)
• Select from CSV file	no
Select To/Cc/Bcc	ves
Operation for the Tx Document	Add/Delete/Order Change
Attached File Format	PDF/TIFF-S/TIFF-F
Document select from User box	yes
Document select from network folder	no
Attachment file size limitation	N/A
Attachment file page limitation	N/A
SMB protocol (Windows)	N/A
NFS(Linux)	N/A
AppleTalk(Mac)	N/A
πρηισταικ(ινιαυ)	IN/A

Item	Specifications / Comments
Tx Document Preview	yes
CoverPage Edit	yes
Tx to User	yes (with Fax or I-Fax Tx)
Delete document after Tx	yes (network documents cannot be deleted.)
Tx Priority Setting	lno
Communication Options	
Reply-to mail address edit	no
Use e-mail address of user info	N/A
Address preset	N/A
Select from registered addresses	N/A
E-mail Template select (Subject/Body text)	yes
E-mail subject edit	80 characters
E-mail body text edit	1024 characters
Add signature	no
• Direct Input	no
Select from registered signatures	no
Delayed Tx	yes
Max Delayed Period	31 days
DSN setting	yes
ON/OFF setting by job	lno l
MDN setting	yes
ON/OFF setting by job	lno l
MDN waiting period setting	24 hours (possible to change in Service Mode)
I-Fax Tx Details (by Control Panel)	24 Hours (possible to origings in service Mode)
Tx with Log-in (same method as I-Fax)	yes
Destination specifying method	
• Direct Input	yes (max. 30)
Select by Address Book	yes (1000 / max. 2000 with 512MB)
Select by LDAP search	yes (Max. 30)
• Select from CSV file	Ino
To/Cc/Bcc Select	yes
Operation for the selected documents	no
Document select from User box	no
Document select from network folder	no
<ul> <li>Attachment file size limitation</li> </ul>	N/A
<ul> <li>Attachment file page limitation</li> </ul>	N/A
<ul> <li>SMB protocol (Windows)</li> </ul>	N/A
NFS Linux)	N/A
<ul> <li>AppleTalk (Mac)</li> </ul>	N/A
Auto divided Tx	
• by page	yes
<ul> <li>by arbitrary pages</li> </ul>	no
<ul> <li>by amount of data</li> </ul>	no
Quick Tx	no
(send each page concurrently with scanning)	
Tx Document Preview	ino i
CoverPage Edit	no In a
Tx to User	no In a
Delete document after Tx	no Inc
Tx Priority Setting	no
Communication Options	
Reply-to mail address edit  • Use e-mail address of user info	l <sub>vos</sub>
	lyes
Direct Input     Soloet from registered addresses	no no
Select from registered addresses     Address preset	no vos 1 address
Address preset	yes, 1 address

ltem	Specifications / Comments
E-mail template select (Subject/Body text)	yes
E-mail subject edit	yes
E-mail body text edit	yes
Add signature	no
Direct Input	N/A
<ul> <li>Select from registered signatures</li> </ul>	N/A
Delayed Tx	yes
<ul> <li>Max Delayed Period</li> </ul>	31 days
DSN setting	no
<ul> <li>ON/OFF setting by job</li> </ul>	N/A
MDN setting	no
ON/OFF setting by job	N/A
MDN waiting period setting	N/A

# I-Fax Reception Function

Item	Specifications / Comments
Mail	
<ul> <li>Select by Address Book</li> </ul>	yes
Direct Input	50 characters x 30 destinations
<ul> <li>Select by LDAP search</li> </ul>	yes (Max. 30)
<ul> <li>File Format</li> </ul>	TIFF-S/TIFF-F/PDF
Network Folder	
<ul> <li>Select from Short-cut</li> </ul>	yes
Direct Input	yes
<ul> <li>Routing Protocol</li> </ul>	
SMB (Windows)	yes
NFS (Linux)	no
AppleShare (Mac)	no
FTP	
Direct Input	no
Select from Short-cut	no
Enhanced Routing Destinations (exclusive setting)	
Shard Rx Box	yes
Bulletin Board	yes
• Sender	yes
• Doc. Info.	yes
• Subject	yes
Comments	yes
Posting Time	yes
Circulation	no
Processing	no
Setting for Routing setting activate period	
<ul> <li>Start Time (Mon/Day, day of week, Time)</li> </ul>	yes
<ul> <li>End Time (Mon/Day, day of week, Time)</li> </ul>	yes
Repeat Setting	yes
Routing and Print	yes
Routing setting from MFP Control Panel	
Forced Print of distributed Documents	no
Suspend of distribution (by record)	no
Suspend of distribution (All records)	no
Exceptional Distribution	no (included in the regular routing record)

# Notice Function to Client PC

ltem	Specifications / Comments
Tx completion Notice	yes (InfoMonitor)
Rx Notice (to Recipient)	yes (InfoMonitor)
Rx Notice (to Sender)	no
Delivery Notice (to Sender)	no

# Cover Page

Oover rage	
Item	Specifications / Comments
CoverPage Tx	yes
CoverPage Template	Shared
Stored location of CoverPage	in OB board/Client PC
# of Templates	5 types/128MB
	10 types/256MB
	20 types/512MB
Edit CoverPage	yes (with CoverPage Editor)
Insert Title	yes
Insert Message	yes
Insert Destination Information	yes
Insert Sender's Information	yes
Sender's Information	yes
Name	yes (using User Info)
Company Name	yes (using User Info)
Department Name	no
Zip Code	no
Address 1	no
Address 2	no
Mail Address	yes (using User Info)
Tel	no
Fax	yes (using User Info)
Sub-Address	no
Password	no
Salutation ID	no

#### Communication Log

Communication Log	
Item	Specifications / Comments
Communication Log control	Shared with the main unit's log
Items on the Communication Log	
Destination Address	yes
• # of Pages	yes
Communication Mode	yes
Communication Period	yes
Date&Time	yes
Result	yes
Detailed Information	
Details of Error	yes
Server Response	yes
All addresses of broadcasting	yes
Details of Tx Confirmation	yes
Communication Log display	yes (Control panel/Browser)
Communication Log auto print	yes (Control panel/Browser)
Communication Log manual print	yes (Control panel/Browser)
Tabulation of Comm. Log by user group	no
Tabulation of Comm. Log by user	no
Storage of past communications	yes, by Archiving Function
File download of Comm. Log	yes, only CSV format
Auto e-mail sending of Comm. Log	no

# Communication Job Control

Item	Specifications / Comments
Tx Job Display (initiated at main unit)	yes (Control panel/Browser)
I-Fax Job Display	yes (Control panel/Browser)
Job display by user	yes (Browser)
Job Cancel (initiated at main unit)	yes (Control panel/Browser)
I-Fax Job Cancel (by job)	yes (Control panel/Browser)
I-Fax Job Cancel (by destination)	no
Job order change	no

#### Report

Item	Specifications / Comments
Tx Error Message	yes
• Error Details	yes
Description of Server Response	yes
Tx Image Attach	yes
MDN/DSN List Print	yes
Print Language Select	no (depends on the LCD Language)
Format Select	no
<ul> <li>Notice when the waiting time is exceeded</li> </ul>	yes
TCR List Print	yes
<ul> <li>Tx Job Info. (Destination/Day&amp;Time/Result)</li> </ul>	yes
Tx Document Attach (100%/Reduced)	yes
Rx Document Routing Error Report	no (The distributed document itself will be printed
	out)

# E-mail API

Item	Specifications / Comments
E-mail Command	no
HTML Form	no
Retrieve HTML Form	no
Machine Setting by E-mail	no
Job Control (Initial/Cancel/Result Notice)	no
Report by E-mail	
• TCR	yes
Service report	yes
Call service error	yes
<ul> <li>Consumable order sheet</li> </ul>	yes
Communication Log	no
• Error Report	no
Job Complete Notice	no
Life Monitor	no
Machine Settings	no
Reminder	no

# **Network OfficeBridge Settings**

# Address Book Setting

Address book setting	
Item	Specifications / Comments
Address Book	yes
Stored Location	CF
# of Address	1000 (128MB)
	1500 (256MB)
	2000 (512MB)
Reference/Edit Method	yes (Control Panel/Browser)
Personal Address Book	yes
Shared Address Book	yes
Items for registration	
Destination Name	yes
<ul> <li>Kana readings of destination name</li> </ul>	no
<ul> <li>Title of destination name</li> </ul>	no
· Company Name	no
<ul> <li>Kana readings of company name</li> </ul>	no
<ul> <li>Title of company name</li> </ul>	no
Department Name	no
• ZIP Code	no
Address	no
• TEL	no
• Fax	yes
Sub-Address	no
<ul> <li>Password</li> </ul>	no
• E-mail Address	yes
Address Book Import/Export	
· CSV	yes
• vCard	yes
• LDAP	yes
• RDS	yes
Address Book List Print	yes, Control Panel/Browser
Group	
• # of Groups	100(128MB) / 150(256MB) / 200 (512MB)
Group Name Registration	yes
Personal Group	yes
Shared Group	yes
Group List Print	yes

#### **OB User Information Setting**

OB User Information Setting	2 " ' ' / 2
ltem	Specifications / Comments
Display/Setting Method	Browser
User Information Operation	
New Registration	yes (only for Admin.)
• Edit	yes (Admin can edit all users' data, but user can
	edit only his own data.)
• Delete	yes (only for Admin.)
• Forced Delete	yes (only for Admin.)
• Import/Export	yes (only for Admin.)
• CSV Format	yes
• vCard Format	yes (Name/CompanyFax/E-mail)
Registered User List Display	
User Log-in Status Display	yes
User's Unread Document Display	yes (New document arrival)
User Information Item	
• User Name	30 characters
• User ID	no (no ID Setting)
• Password	20 characters
Type (Gateway User)	no
• Company	50 characters
Department Name (User Group Name)	100 characters
• TEL	40 digits
• Fax	40 digits
• E-mail Address	50 characters
Set to the Reply-To address or not	no
Login Icon	yes
LDAP Server Login	yes
Personal Available Address	yes
<ul> <li>Shared/Personal Default Settings</li> </ul>	yes
IP Address of Client PC	yes
• PC Name	yes
Administrator Authority	N/A
List Print	no
Home Directory	yes (Note: the box that has the new arrival docu-
	ment is given the first priority)

# **Device Setting**

Item	Specifications / Comments
Display/Operation Method	Browser
Machine Information (R/W)	
Machine Name	yes
Installation Location	yes
Option Configuration	yes
Machine Status	
Network Connection	yes
• Line	yes
Scanner	yes
• Printer	yes
<ul> <li>Paper Supply (Each Cassette)</li> </ul>	yes
<ul> <li>Output Device (Duplex/2-bin/Shift)</li> </ul>	yes (Duplex only)
Finisher (Staple/Punch)	N/A
Counter Confirmation	yes (only Admin.)
Print Total Count	yes
• Copy	yes
• Fax/List	yes
• PC Print	yes
Scan Total Count	yes
• Copy	yes
• Fax/List	yes
• PC Print	yes
Initialize	yes, for Machine Information (only Admin.)

#### Fax Communication Job

Item	Specifications / Comments
Tx Job Display (initiated at main unit)	yes (Control panel/Browser)
PC-Fax Job Display	yes (Control panel/Browser)
Job display by user	yes (Browser, in Personal Outbox Tab)
Fax Job Cancel (by job)	yes (Control panel/Browser)
Fax Job Cancel (by destination)	yes (Control panel)
PC-Fax Job Cancel (by job)	yes (Control panel/Browser)
PC-Fax Job Cancel (by destination)	yes (Control panel)
Job order change	no

#### E-mail Communication Job

Item	Specifications / Comments
Tx Job Display (initiated at main unit)	yes (Control panel/Browser)
PC-IFax Job Display	yes (Control panel/Browser)
Job display by user	yes (Browser, in Personal Outbox Tab)
Job Cancel (by job, initiated at main unit)	yes (Control panel/Browser)
Job Cancel (by destination, initiated at main unit)	no
PC-IFax Job Cancel (by job)	yes (Control panel/Browser)
PC-IFax Job Cancel (by destination)	no
Job order change	no

#### Print Job

Item	Specifications / Comments
Job Display/Operation Method	yes (Browser)
	(Note) The security print job can be viewed only by
	the initiated user.
Job Details Display	yes
Document Name	yes
Status	no
• User Name	yes (Windows User Name)
<ul> <li>User Group Name</li> </ul>	no
• Progress	yes
Print Time	yes
Job Cancel	yes (Control panel/Browser)
	Available only for the jobs in the Is memory.
Job order change	no
Tabulation of Print Counter by user group	yes, in User Access & Control screen
Tabulation of Print Counter by user	yes, in User Access & Control screen

# Fax Communication Log

Item	Specifications / Comments
Fax Communication Log Display	yes (Control panel/Browser)
# of Log	Latest 100 communications (Tx + Rx)
Items on the Communication Log	
Destination	yes
• # of Pages	yes
Comm. Mode	yes
Comm. Time	yes
Date&Time	yes
Result	yes
Details	
Error Code	yes
Broadcast Locations	yes
Comm. Log Auto Print	yes (Control panel)
Comm. Log Manual Print	yes (Control panel/Browser)
Tabulation of Comm. Log by user group	no
Tabulation of Comm. Log by user	no
Storage of communications	yes, by Archiving Settings (to folder).
	(Note) Comm. Result cannot be stored in the Ar-
	chiving Function.
Download of Stored Comm. Log	yes, CSV format

# E-mail Communication Log

Item	Specifications / Comments
E-mail Communication Log Display	yes (Control panel/Browser)
# of Log	Latest 100 communications (Tx:50. Rx:50)
Items on the Communication Log	
Destination Address	yes
• # of Pages	yes
Comm. Mode	yes
Comm. Time	yes
Date&Time	yes
Result	yes
Details	yes
Error Details	yes
Server Response	yes
Broadcast Locations	yes
Tx Conformation	yes
Comm. Log Auto Print	yes (Control panel)
Comm. Log Manual Print	yes (Control panel/Browser)
Tabulation of Comm. Log by user group	no
Tabulation of Comm. Log by user	no
Storage of past communications	yes, by Archiving Settings (to folder).
	(Note) Comm. Result cannot be stored in the Ar-
	chiving Function.
Download of Stored Comm. Log	yes, CSV format

# User Access/Cost Accounting (only Admin.)

Item	Specifications / Comments
Display Method	Browser (only Admin.)
<ul> <li>Sort by User Index</li> </ul>	yes
Sort by Group	yes
Items on the list	
• Index	yes
• Group	yes
• User Name	yes
<ul> <li>Fax Transmission Time</li> </ul>	yes
• Fax Tx # of Pages	yes
• Fax Charge	yes
Copy # of Pages	yes
Copy Charge	yes
• Scan # of Pages	yes
Scan Charge	yes
<ul> <li>PC Print # of Pages</li> </ul>	yes
PC Print Charge	yes
List Print	
• Total	yes
Group Unit	yes
User Unit	yes
Data Download	yes, CSV format
Data Clear	yes
Report Function	
E-mail Report of Total list	no
• E-mail Report by Group unit	no
• E-mail Report by User unit	no

# TCP/IP Settings (only Admin.)

Specifications / Comments
yes (Control panel/Browser)
yes
yes
yes (max. 2 addresses)
yes (max. 2 addresses)
yes (50 characters)
yes, renew command is supported
yes (Browser)
yes (Control panel)
yes (Control panel)
yes
yes
yes (max. 2 addresses)
yes
yes
yes
yes

# Network Setting Code (only Admin.)

Item	Specifications / Comments
Read/Write Code	yes, 4 digits
Read Only Code	yes, 4 digits
Backdoor Password	yes, embedded 7 digits

# SMPT/POP Settings (only Admin.)

Item	Specifications / Comments
Setting Method	Browser
Machine E-mail Address	yes
Machine Name	yes
Reply-to Address	yes
SMTP Server Setting	
<ul> <li>Mail Server Address/Domain Name</li> </ul>	50 characters
Substitute Tx Mail Server	no
SMTP Port Number	1-65535
<ul> <li>Main Retrieve before Tx</li> </ul>	yes
<ul> <li>SMTP Authentication</li> </ul>	yes, LOGIN / PLAIN / CRAM-MD5
- SMTP Auth Account	yes
- SMTP Auth Password	yes
POP3 Server Setting	
<ul> <li>POP Server Address/Domain Name</li> </ul>	yes
• E-mail Account	yes
Password	yes
POP3 Port Number	yes
<ul> <li>APOP Authentication</li> </ul>	yes
Auto Rx Interval	5sec 99 hrs 59min. 59sec, 0 (Stop)
SMTP Rx Setting	
Rx Domain Name	50 characters
• Rx Port Number	0-65535
<ul> <li>E-mail Address/Domain Name/IP Address to allow Rx</li> </ul>	50 characters x 5

#### E-mail Settings (only Admin.)

E-mail Settings (only Admin.)  Item	Specifications / Comments
Attachment File Format	TIFF-FX(Profile-S) (default)
Attachment File Format	TIFF-FX(Profile-5) (default)
	PDF
Coding Method of TIFF-FX (Profile-F)	MH/MR/MMR/JBIG
Insert Body Text in Tx	in the training object
· YES/NO	yes
• Language	English
Sender's Information	Attached/Not attached
# of Body Text Template	10
Items for Body Text Template	
Template Name	yes, 40 characters
• Subject	yes, 80 characters
Body Text	yes, 1024 characters
Show recipients on Tx e-mail	yes (show all recipients)
onew resipients on the small	no (show no recipients)
Insert Signature	The (chew he recipiente)
• YES/NO	no
Signature Setting (text area)	no
Request for Reception Confirmation	
• DSN Request	yes
MDN Request	yes
DSN+MDN Request	yes
• Do not request	yes
MDN Waiting Period	no
Reply to MDN	
• YES/NO	yes
Yes only when you are designated as "TO"	17
recipient	
• E-mail Address/Domain Name to allow reply	50 characters x 5
MDN	
Handle of undecipherable E-mail reception	
Print Error Report	no
Send Error Report	yes (default)
Return Original Mail	yes
Forward to other E-mail Address	yes
Forwarding E-mail Address	1 destination, 50 characters
Handle of Rx E-mail with Forwarding Request	
Deny Request	yes
Accept Request	yes
E-mail Address/Domain Name to allow for-	17
warding	
Return Forwarding Result	ves
	11

#### Archive Settings (only Admin.)

Archive Settings (only Admin.)	
Item	Specifications / Comments
Auto Archiving ON/OFF	yes (Control panel/Browser)
Documents for Archiving	
Memory Tx Fax	yes
• PC-Fax Tx	yes
• Tx I-Fax	yes
Memory Rx Fax	yes
• Rx I-Fax	yes
• Fax Forward Tx	yes
Scanner Tx Fax	no
Manual Tx Fax	no
<ul> <li>F-code Secure Box Rx Fax</li> </ul>	no
<ul> <li>F-code Bulletin Box Rx Fax</li> </ul>	no
Polling Rx Fax	no
F-code Polling Rx Fax	no
Polling Tx Fax	no
F-code Polling Tx Fax	no
Scanned Document	no
Print Document	no
Copy Document	no
• Report Tx	no
Canceled Jobs	no
Non-available functions when the Archive setting is	
ON	F-Code Bulletin Board Tx
Archiving Destinations	
• E-mail Address	yes (Tx I-Fax cannot be archived to I-Fax)
• Fax Number	yes
• Folder	yes
• FTP Address	no
• User	no
File Format of archived document	PDF / TIFF-S / TIFF (default: TIFF-S)
Index file of archived documents	yes, when the network folder is selected as desti-
	nation (CSV format, up to 1000 logs in 1 file)
Data Type	yes
Communication Executed Time	yes
• File Name	yes
• File Path	yes
• # of pages	yes
• Sender	yes
Destination	yes
Communication Result	no
Archiving setting by user	no

# Network Scan Setting (only Admin.)

Item	Specifications / Comments
Batch Scan Setting	
• ON (1 stuck -> 1 file)	yes (default)
<ul><li>OFF(1 page -&gt; 1 file)</li></ul>	yes
<ul> <li>Sheet Mode (1 sheet -&gt; 1 file)</li> </ul>	no
Storage Period of scanned Document	yes, 1-99 days/Indefinite (default: Indefinite)

# **Shortcut Settings**

Item	Specifications / Comments
Create Folder Short-cut	yes (max. 300 short-cuts)
The # of shortcut increase by CF quantity in-	no
crease	
Setting Items	
Shortcut Name	yes
Folder Path	yes
User Name	yes
Password	yes
Automatic Network Login	yes (default: ON)
Create FTP URL Short-cut	yes (max. 20 short-cuts)
The # of shortcut increase by CF quantity increase	no
Setting Items	
Shortcut Name	yes
Host Name	yes
Folder Name	yes
User Name	yes
• Password	yes

# File Name Settings

Item	Specifications / Comments
File Name Setting	
• Auto	yes, YYYYMMDDHHMMSS
Manual	yes, up to 100 characters
• Select	yes (# of prefixed name: 10)
Category Setting (Scan to OB)	
Manual	yes, up to 20 characters
• Select	yes (# of prefixed type: 10)

# Personal Outbox Setting (only Admin.)

Item	Specifications / Comments
Tx Document Delete/Leave after Tx completion	yes (default: Delete)
<ul> <li>Storage Period of Tx Document (when "leave" is selected)</li> </ul>	yes,1-99 days/Indefinite (default: 30 days)
CoverPage	
ON/OFF Setting	yes
Template Select	yes
Default Subject	80 characters
Default Message	1024 characters
Check Message Print ON/OFF when PC-Fax Tx	no (check message is printed out)
Error	

# Temporary Stored Document (only User)

Item	Specifications / Comments
Operation for Temporary Stored Document	
Reference	yes (only docs uploaded by himself)
• Delete	yes (only docs uploaded by himself)

### Received Fax Forward Setting (only Admin.)

Item	Specifications / Comments
Storage Period of Rx Document	yes, 1-99 days/Indefinite (default: 30 days)
Auto Routing Function	yes
Routing Method	Dedicated Routing Table, 100
Setting Method	Browser
<ul> <li>Routing Table Display</li> </ul>	yes
Routing Table Edit	yes
<ul> <li>Routing Table Details</li> </ul>	
• Name	yes
<ul> <li>Conditions (refer to PC-Fax sheet)</li> </ul>	yes
<ul> <li>Destinations (refer to PC-Fax sheet)</li> </ul>	yes
Active/Inactive	yes
Routing Setting Import/Export	no
Routing Table Print	no
Share Routing Condition	no

### Forward Setting (only User)

Item	Specifications / Comments
# of settings	1
Items for Forward Setting	
• Fax	yes
• E-mail Address	yes
• User	yes
• Leave on Rx Box	yes
Forward & Print	yes
<ul> <li>Start Time (Mon/Day, day of week, Time)</li> </ul>	yes
<ul> <li>End Time (Mon/Day, day of week, Time)</li> </ul>	yes
Repeat Setting	yes

# Initial Settings (only Admin.)

Item	Specifications / Comments
File format of preview document	
• TIFF	yes (default)
• PDF	yes
File format of downloaded OB document	
• TIFF	yes (default)
• PDF	yes
Delete/Leave documents after download	yes
Storage Period of temporary stored documents	yes, 1-30 days/Indefinite (default: 1days)

### Public Inbox Setting (only Admin.)

ltem	Specifications / Comments
Shared Rx Function ON/OFF	yes (default: ON)
Auto Delete of Shared Rx Documents	yes (default: OFF)
Storage Period of Shared Rx Documents	yes, 1-99 days/Indefinite (default: 30 days)
Admin. Authority request to delete documents	yes (default: ON)

# Bulletin Board Setting (only Admin.)

Item	Specifications / Comments
Bulletin Board Function ON/OFF	no
Billing Period Initial Setting	Bill Indefinitely / Delete after a certain period
Billing Period of Bulletin Board Documents	yes, 1-99 days (default: 30 days)
Admin. Authority request to delete documents	yes (default: ON)

#### Circulation Setting

Item	Specifications / Comments
Circulation Function ON/OFF	no
Auto Delete after circulation	N/A
Storage Period of documents after circulation	N/A
Admin. Authority request to delete documents	N/A

### Request Processing Setting

Item	Specifications / Comments
Request Processing Function ON/OFF	no
Default period of process	N/A
Document auto delete after process completion or requested period expiration	N/A
Storage period of documents after process completion or requested period expiration	N/A
Admin. Authority request to delete documents	N/A

### SNMP Agent Setting (only Admin.)

Item	Specifications / Comments
Setting Method	Browser
Service Activate ON/OFF	yes
Agent Recognition Setting	yes
Contact Destination	yes
• Name	yes
Location	yes
Security Setting	yes
Request All Host	yes
IP Address	yes
Community Name	yes
Request Designated Host	yes
# of Designated Host	3
IP Address	yes
Community Name	yes
Trap sending destination	no
# of destination	no
Notice event	no
Consumable Order Information	no
SNMP Agent Initialize	yes
	Version 1

# Network Filtering Setting (only Admin.)

Item	Specifications / Comments
Setting Method	Browser
MAC Address	yes, Accept or Refuse
Available # of settings	50
IP Address	yes, Accept or Refuse
Available # of settings	50
Range specification	yes, within the 4th octet
Unacceptable Port Number	yes
Available # of settings	50
Initialize	yes (Browser/Control Panel)

#### Machine Setting (only Admin.)

Item	Specifications / Comments
Setting Method	Browser/Control Panel
Setting Items	
<ul> <li>Jobs waiting to print</li> </ul>	no
Copy Settings	yes
Fax Settings	yes
<ul> <li>Scanner Settings</li> </ul>	yes
Mail Settings	yes
Management Settings	yes
<ul> <li>F-code Box Settings</li> </ul>	yes
<ul> <li>Junk Fax Block Settings</li> </ul>	yes
<ul> <li>Soft Key Settings</li> </ul>	yes
User Install	yes

# Remote Connection Setting (only Admin.)

Item	Specifications / Comments
Setting Method	Browser (in the upgraded version)
Setting ON/OFF	yes (in the upgraded version)
Login Name	yes (in the upgraded version)
Login Password	yes (in the upgraded version)
Initialize	yes (in the upgraded version)

# **LDAP Settings**

# LDAP Basic Specification

Item		Specifications / Comments
LDAP Supported Version	Version.2	no
	Version.3	yes
LDAP Operation		
	Search	yes
	Compare	no
	Delete	no
	Add	no
	Modify	no

# Programmable LDAP Server

Item	Specifications / Comments
# of LDAP Server	5
LDAP Setting Parameters	
Name	yes, 23 characters
LDAP Server Name	yes, 99 characters
IP Address	yes
LDAP Port #	yes
Search Base	yes, 99 characters
# of max. results setting	yes, 001-100 (default 50)
Time Limit	yes, 0000-9999 (default: 0000 = Unlimited)
Authentication	
anonymous	yes
name	yes
name+password	yes
SASL	no
Search Method	Any, Initial, Final, Equal, Not Use

#### LDAP Search Operation

LDAP Search Operation	
Item	Specifications / Comments
Search Method	
Name	yes
Default Name Description1	cn
Default Name Description2	commonname
# of characters	49 characters
E-Mail	yes
Default E-Mail Description1	mail
Default E-Mail Description2	-
# of characters	49 characters
Fax #	yes
Default Fax Description1	facsimileTelephoneNumber
Default Fax Description2	-
# of characters	
TEL#	yes
Default TEL Description1	telephonenumber
Default TEL Description1	-
# of characters	49 characters
Organization	yes
Default Organization Description1	0
Default Organization Description1	ou
# of characters	49 characters
Search Rule Setting	yes
	Default setting
Search Key Rule Setting	
Equal	yes
Initial	yes
Final	yes
Any	yes (default)
Not Equal	no
Not Any	no
Exist	no
Not Use	yes
Operation Interface	
MFP Control Panel	yes
Browser via network	yes(Multi Clients)

#### LDAP Search Result Operation

LDAI Ocarcii ricsuit Operation	
Item	Specifications / Comments
Continue to search with referer	yes
# of referers	3
# of continuous referers	10
Display detailed information	yes
Use search results as	
Fax destination	yes
E-Mail destination	yes
Address Book Registration	yes
Multiple-destination	yes

# Supported character codes

Item	Specifications / Comments
US ASCII	yes
UTF-8(Latin1)	yes

#### Supported directory servers

ltem	Specifications / Comments
Active directory on Microsoft Windows 2000 server (ENG)	yes
Active directory on Microsoft Windows 2003 server (ENG)	yes
Novell e-Directory on Windows 2000 server(ENG)	no
OpenLDAP on LINUX(ENG)	yes

#### **Network Authentication**

#### **Supported Authentication Servers**

ltem	Specifications / Comments
Windows NT 4.0 Server SP4 later	yes
Windows 2000 Server (Active Directory)	yes
Windows Server 2003 (Active Directory)	yes

#### Supported Protocol for Authentication

Item	Specifications / Comments
Windows NT 4.0 Server	SMB(NTLM version2)
Windows 2000 Server/Windows Server 2003	Kerberos v5

#### Kerberos Basic Functions

Item	Specifications / Comments
Encription Type	RC4 HMAC
Renewal of Tickets	no
Cache of Tickets	no
Clock Synchronization Method	SNTP version1

#### **LDAP Basic Functions**

Item	Specifications / Comments
SASL Support	GSSAPI(only Network Authentication)
Search Filter	I(UserPrincipalName= <user>@<domain>)(sAMAc countName=<user>)</user></domain></user>
	<user> : user name <domain> : domain name</domain></user>
Search Attributes	display
	Name
	cn
	mail
	telephoneNumber
	department
Search Start Point	The domain at each level is specified by "dc=".

#### Search Method of Authentication Server

Item	Specifications / Comments
Windows NT 4.0 Server	WINS or Broadcast
Windows 2000 Server/Windows Server 2003	DNS

#### Authentication of Domain with Mutual Trust

ltem	Specifications / Comments
Windows NT 4.0 Server	yes
Windows 2000 Server/Windows Server 2003	yes

#### Mail Address Relation

Item	Specifications / Comments
Acquisition of User Mail Address	
Windows NT 4.0 Server	no
Windows 2000 Server/Windows Server 2003	yes
Use of Mail Address of Equipment	When the user mail address was not able to be ac-
	quired.
From Format	displays Name <mail> or cn<mail></mail></mail>

# Logout Display

Item	Specifications / Comments
Reset Key Pressing	yes
Display of User Name	N/A
Display of User Mail Address	N/A
Number of Displays of Mail Addresses	N/A

#### **Network Authentication Settings**

Item	Specifications / Comments
Read/Write Protect	yes
Default Authentication Server	None
Automatic Logout Function Support	yes
Range of Automatic Logout Time	1 -10 (min)
Default Automatic Logout Time	3 (min)
Authentication Setting of Each Function	yes
Default of Copy Authentication	no
Default of Fax Authentication	yes
Default of Scan Authentication	yes

# Number of characters that can be input

ltem	Specifications / Comments
User Name	50
Password	32
Domain Name	15 or 64
Windows NT Server	15
Active Directory	64

#### **Authentication Situation**

Item	Specifications / Comments
MFP Control Panel	yes
Browser via network	no
PC-Print	no
PC-FAX	no
TWAIN	no

#### Others

Item	Specifications / Comments
Single Sign-on with OB login	yes, when the User ID and Password are the same

# 2 Machine Composition

# 2.1 Document Scanning Sequence

#### 2.1.1 ADF Detection

When a document is placed into the document feeder, Document Sensor 1 (DS1) is activated and you will hear the short beep.

The document will be transferred when the start key is pressed.

Document separation is the process that allows a multi-page document to go through the scanner one page at a time. The top document is separated from the remaining documents by friction of the separator roller.

Following the document separation, the feed roller causes the document to advance. As it advances, the leading edge of the document activates the Document Sensor 2 (DS2) sensor. Once DS2 is activated, the feed roller continues to rotate until the document reaches the scan position. The machine uses the distance from DS2 to the scan position and the diameter of the feed roller to determine the number of rotations necessary to feed the document to the scan position.

When the document reaches the scan position, the light from the scanner lamp strikes the face of the document and is reflected into the lens through mirrors A, B, and C. In case the light intensity along the length of the scanner lamp is not uniform, shading compensation is provided to ensure even illumination.

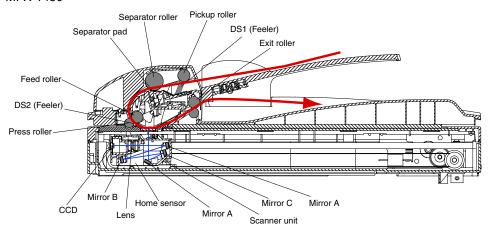
As the reflected image passes through the lens, it is focused onto the charged coupled device (CCD).

The CCD then converts the dark and light areas of the image into electrical impulses, or image data.

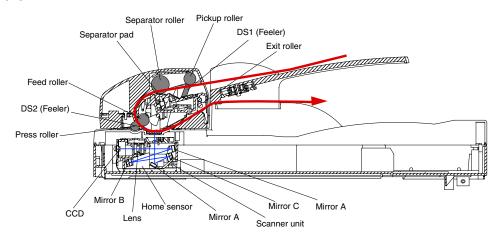
When DS2 detects the trailing edge of the document, the image signal output is turned off. The scanner continues to remain active for a few more seconds in case there is another document to follow.

The scanned document is discharged through the document exit by the exit roller.

#### MFX-2050 / MFX-1450



F-565 / F-525



#### Original Detection

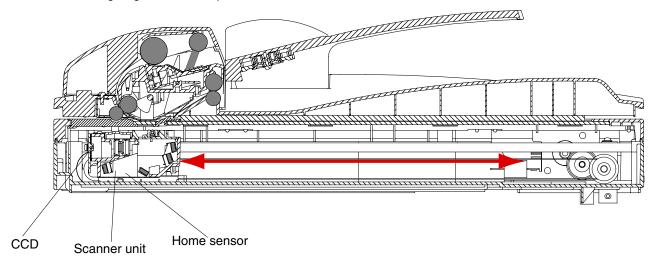
The sizes of the documents are detected by the following two sensors;

Detection	Action	Sensor
Document presence Detects whether there is a document on		DS1
	the tray or not	
Leading and trailing edge	Detects the leading and trailing edge of	DS2
detection	the feeding document	

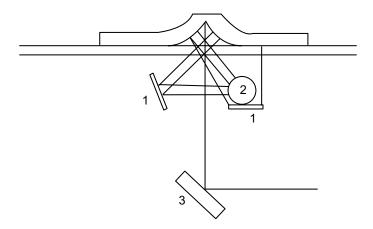
# 2.1.2 FBS section (MFX-2050 / MFX-1450 only)

Light reflected from the original passes through three mirrors and a lens to form a reduced image on the CCD Sensor as the Scanner Motor moves the Scanner. The CCD sensor converts the light pattern (image data) into an electrical image signal.

The electrical image signal is then output to the Main Board.



Exposure Section: Construction and Function



#### 1 Reflector Tape

The Reflector Tape reflects the light from the Exposure Lamp and supplements its illumination.

#### 2 Exposure Lamp

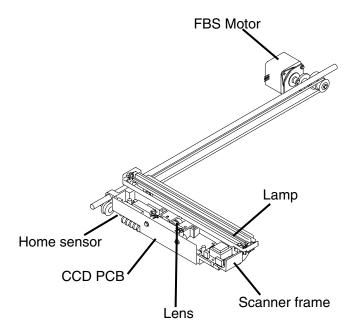
A Cold Cathode Fluorescent Lamp (CCFL) is used to illuminate the original.

#### 3 Mirror

Directs the reflected light from the original to the lens.

#### Scanner frame Moving Mechanism

- During a scan, the scanner frame projects an even amount of light from the Exposure Lamp onto the entire surface of the original. The light is reflected from the original to the Mirror through the lens to the CCD.
- The scanner frame is driven by the FBS Motor and Scanner Drive belts.
- Scanner speed is determined by the set zoom ratio in reference to the full size mode.
- The scanner frame is at home position where ADF scanning begins. The home sensor watches this position.

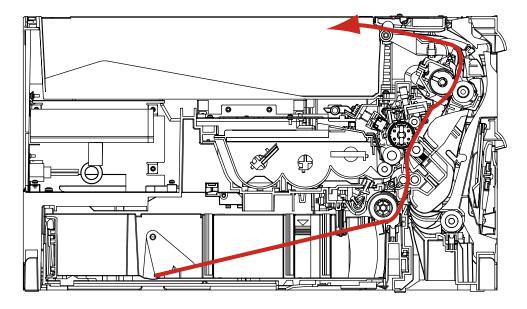


# 2.2 Recording Section

# **Recording Paper Feed Path**

A sheet of the recording paper is separated from the remaining paper by the friction of the pickup roller.

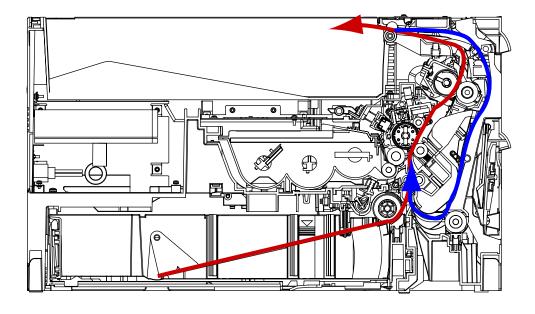
The paper is moved along the paper guide until it reaches the register roller. It then fed by the rotation of the register roller.



If there is a duplex printing unit, the machine can print both sides of the paper (duplex printing).

When the first side of the paper is printed, it is transferred to the exit. However after a few steps after the PDS and DPS sensor detected the trailing edge, the exit roller rolls in reverse and the paper is transferred to the image processing area by the duplex rollers.

It reaches to the image transfer area turned inside out, and the duplex side of the paper is printed.



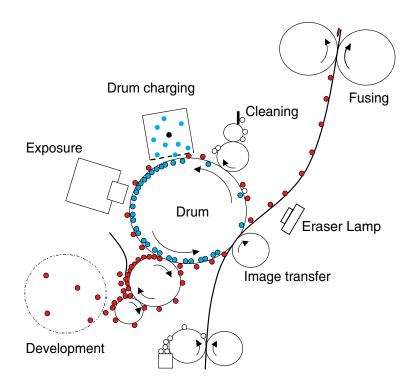
# 2.3 Image Processing

Incoming data is received from the telephone line by the NCU and sent to the main control PCB. The modem, located on the main control PCB, demodulates the data.

The data is then sent to the printer for image processing.

The image processing is roughly divide into the following steps:

- 1. Drum Charging
- 2. Drum Exposure
- 3. Development
- 4. Image transfer
- 5. Fusing
- 6. Erasing
- 7. Cleaning



# 2.3.1 Drum Charge

- The Drum is charged with corona discharge before LED exposure. A charge wire and a charge grid are used for the charging method.
- The corona discharge generates little ozone in the printer. It also keeps the wire from becoming dirty. Because the discharge, the Drum can be charged evenly.

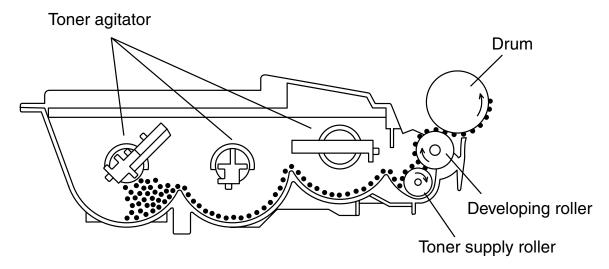
# 2.3.2 Drum Exposure

The light makes an invisible static image from the LED print head.

The LED print head, located inside the printer cover, closes down over the drum and projects light onto the drum surface. When the document is to be printed, individual elements in the LED print head turn on and expose the drum wherever a dark area should appear in the document.

### 2.3.3 Development

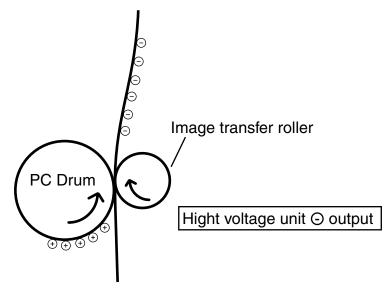
Toner is applied to the invisible static image on the Drum and a toner image is created on the surface.



	Part Name	Function
1	Toner Agitator	Agitates toner.
2	Toner supply Roller	Transports the toner to the developing roller.
3	Developing Roller	Carries the toner to the Drum surface for development.
4	Drum	Exposed by LED light to create an invisible image and rotates to carry the developed image to the paper surface.

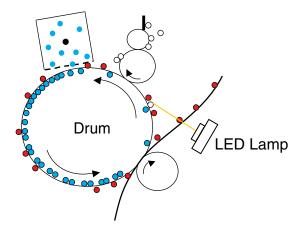
# 2.3.4 Image Transfer

Image transfer is the process of transferring the toner image created on the Drum in the developing process to paper. In the Roller Image Transfer, there is little generation of ozone due to corona discharge. Also, there is no blur of toner because the paper is always pressed by the Drum and the Image Transfer Roller.



# 2.3.5 Erasing

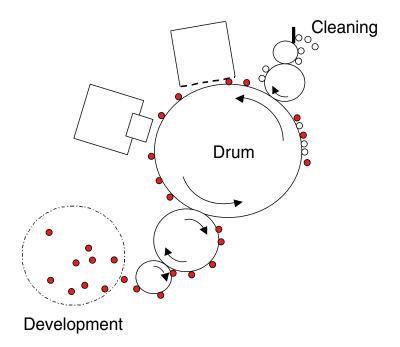
An LED lamp exposes the Drum surface. When it is exposed the drum charge erases. This helps the drum to be recharged evenly at the next step of charging.



# 2.3.6 Cleaning

The residual toner or paper dust must be removed from the drum. Paper dust is removed from the drum surface by a rubber roller. And then by a metallic roller, and finally scraped off.

The residual toner is removed by the developing roller and toner supply roller, and is recycled.



# **2.3.7 Fusing**

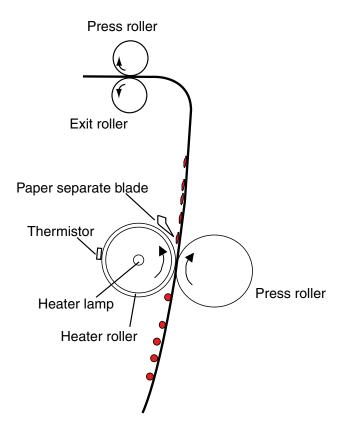
An Overview

The toner image transferred on to the paper is securely fixed.

A heat roller system is used as the fusing system. The toner image is fused by Heater Roller heated by the Heater Lamp, and securely fixed by the pressure between the Heater roller and Press rollers.

A Thermistor detects and controls the Heater Roller temperature.

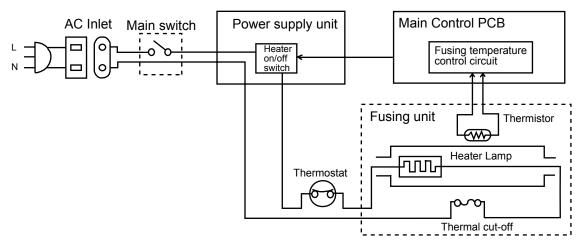
The Thermostat functions when the Heater Lamp is not turned OFF even if the Thermistor detects a high temperature malfunction.



#### **Fusing Temperature Control Circuit**

The Thermistor detects the surface temperature of the Heater Roller and inputs that analog voltage into the Main Control PCB. Corresponding to this data, the Heater Lamp ON/OFF signal is output to the Heater ON/OFF switch of the power supply unit, causing the Heater Lamp to turn ON or OFF to control the fusing temperature.

When the Heater Lamp is not turned OFF even if the Thermistor detects a high temperature malfunction, the thermostat shuts down the power to the heater lamp. When the thermostat is malfunction, the thermal cut-off shuts down the power to the heater lamp.



#### Fusing temperature

1) Warming Up After the initialization of the printer, warming up of the printer starts and the

Heater Lamp turns ON until the temperature of the Heater Roller reaches ap-

prox. 180 °C or 200 °C according to the machine type.

2) Printing When the printer obtains the printing command from its controller, the Heater

Roller is maintained at 180 °C or 195 °C according to the machine type. After printing, the printer turns to standby mode. The fuser kept at low tem-

perature.

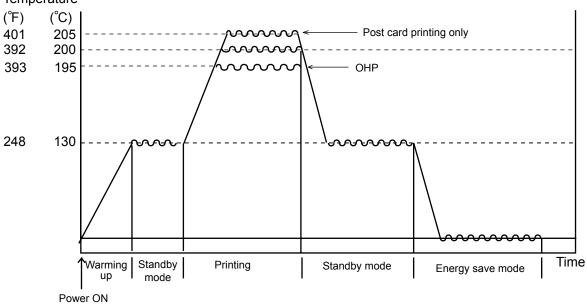
3) Standby mode The Heater Roller maintained at approx. 110 °C or 130 °C according to the

machine type.

4) Energy save mode In this mode, saving the power.

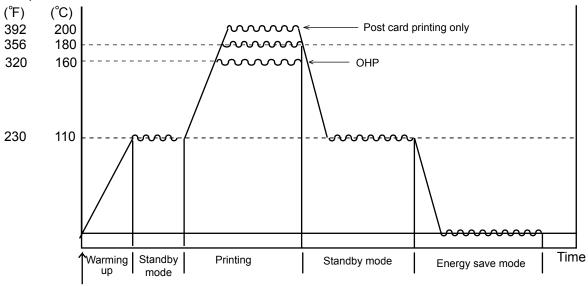
#### MFX-2050 / F-565

Temperature



#### MFX-1450 / F-525





# 2.4 Interconnect Block Diagram

See the attached files.

# 2.5 Main Control PCB

The main control PCB controls the operations of all machine functions.

Jumper JP1 on the main control PCB is used for battery back up of the SRAM. All user programmed data and internal memory switch settings are held in SRAM. Removing JP1 will initialize the SRAM. If the power is turned off, the battery will provide up to five years of back up when fully charged.

Note: JP1 should remain in the "ON" position at all times.

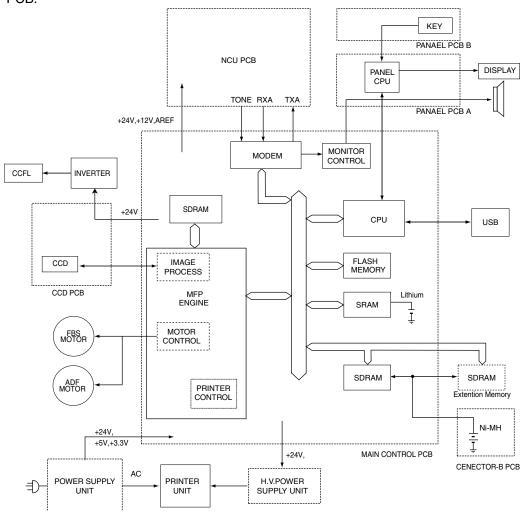
Memory (FLASH MEMORY, SRAM, SDRAM)

FLASH MEMORY - The FLASH MEMORY contains all program instructions for unit operation.

**SRAM** -The SRAM, which is backed-up by a lithium battery is used to store user programmed information.

**SDRAM** -The SDRAM is used for buffer, which is backed-up by a battery is used to store memorized documents.

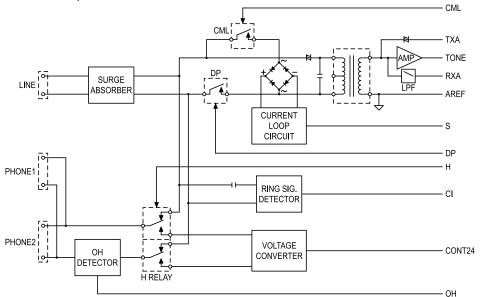
**Note**: Turning parameters for Color(R,G,B) and Gray mode are stored in the EEPROM(IC42). When the PCB MAIN is replaced, the EEPROM on malfunction PCB should be replaced to the new PCB.



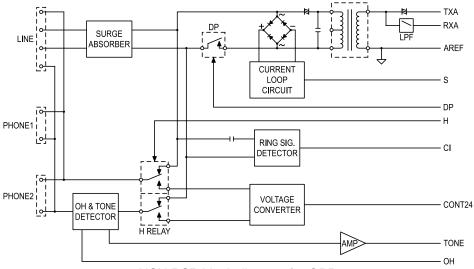
Main control PCB block diagram

# 2.6 Network Control Unit (NCU) PCB

The NCU PCB provides the connection to the telephone line. It consists of the interface circuit, ring signal detector and telephone control circuit.



NCU PCB block diagram for USA



NCU PCB block diagram for GBR

#### Major components of the NCU

#### **DP** relay

Connects the telephone line to the fax.

#### S relay

Used to connect the telephone line at seizure state.

#### **OH & Tone detector**

Detects the On-hook condition of the second telephone unit.

#### H relay

Disconnects the Tel1 and Tel2 line from PSTN.

#### 24V generator

Supplies 24 volts to the relays for OH detection of optional handset or external telephone line.

#### Ring signal detector

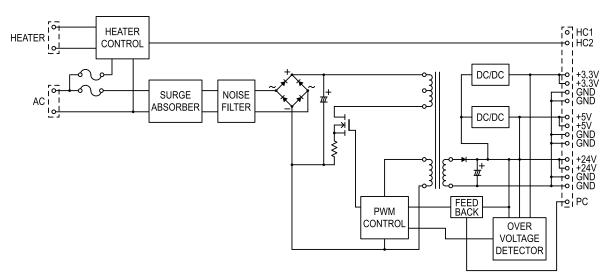
A photo coupler that detects an incoming ring.

# 2.7 Power Supply Unit (PSU)

The power supply unit receives the input line voltage and currents it to output voltages of +3.3DVC, +5 VDC and +24 VDC.

The heater circuit controls output voltage to the fuser heater according to instructions received from the heater control circuit.

If an over-current is sensed in the secondary circuit, power is interrupted.



The power supply unit has two output connectors.

The following table shows the connector outputs:

CN101 - to the Fuser Heater

Pin No.	1	2
Output	L	N

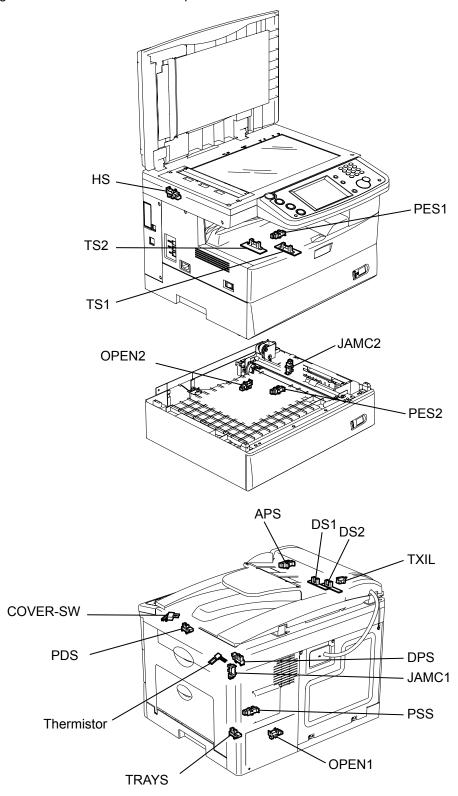
CN2 - to the Main Control PCB.

F	Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Output oltage	РС	HC2	HC1	+5	5V	s	G	+3.	.3V	s	G	+2	4V	Р	G

# 2.8 Sensors

# 2.8.1 Sensor Locations

The following illustration shows the relative positions of the machine's sensors.



# 2.8.2 Sensor Descriptions

The following table gives a brief description of each sensor and its function.

Code	Name	Detects	Sensor Type	Remarks
DS1	Document sensor 1	Presence of document in feeder	Photo interrupter	
DS2	Document sensor 2	Leading and trailing edge of document	Photo interrupter	
APS	ADF permit sensor	Platen cover quite close or not	Photo interrupter	
HS	Mirror carriage home position sensor	Mirror carriage position	Photo interrupter	
TXIL(ADF)	Interlock switch (ADF)	Scanner cover open or close	Mechanical Switch	
Cover-SW		Detects front cover and the 1st cassette jam access cover are open or close	Mechanical Switch	
PDS	Paper discharge sensor	Detects paper pass at paper exit.	Photo interrupter	
DPS	Duplex paper sensor	Detects paper pass of the duplex printing paper	Photo interrupter	MFX-2050 / 1450 only
Thermistor		Detects and controls the Heater Roller temperature	Thermistor	
OPEN1	Paper cassette open sensor	Detects the 1st paper cassette open or close	Photo interrupter	
PES	Paper empty sensor	Detects presence of recording paper in the 1st paper cassette	Photo interrupter	
TS1	Toner sensor 1	Detects the toner empty for small capacity toner cartridge	Photo interrupter	
TS2	Toner sensor	Detects the toner empty for large capacity toner cartridge	Photo interrupter	
PSS	Paper supply sensor	Detects paper feeding out of cassette/tray	Photo interrupter	
TRAYS	Tray sensor	Detects presence of recording paper in the bypass tray	Photo interrupter	
JAMC1	Jam access cover sensor	Detects the side cover open or close	Photo interrupter	

PES2	Paper empty sensor	Detects presence of recording paper in the 2nd paper cassette	Photo interrupter
OPEN2	Paper cassette open sensor	Detects the 2nd paper cassette open or close	Photo interrupter
JAMC2	Jam access cover sensor	Detects the 2nd paper cassette side cover open or close	Photo interrupter

# 2.9 Function detail and additional information

# 2.9.1 Port setting list

Application	Functions	Port	Default number
Muratec OB InfoMonitor	Acquiring new arrived data	HTTP Port	80
	Acquiring the user list	HTTP Port	80
	Searching for Server	Search Port	61000
	Popping up messages for new arrived documents	Client Port	60000
Muratec OB	Acquiring CoverPage's list	HTTP Port	80
CoverPageEditor	Uploading CoverPage	HTTP Port	80
	Searching for server	Search Port	61000
Muratec OB Document	Acquiring new arrived data	HTTP Port	80
Download Manager	Downloading image	HTTP Port	80
	Acquiring the user list	HTTP Port	80
	Searching for server	Searching Port	61000
Installer	Searching for server	Searching Port	61000
TWAIN	Acquiring new arrived data	HTTP Port	80
	Downloading image	HTTP Port	80
	Acquiring the user list	HTTP Port	80
	Searching for server	Search Port	61000
Printer	Sending print data	HTTP Port	80

# 2.9.2 Address Book Import / Export

CSV files and vCard files are able to import to or export from the Address book using the browser.

The following items will be covered in this section:

Import details

Import results and error details

Export details

#### Import details

The following file types are available to import to the address book.

- vCard files
- CSV files exported from Muratec products, Outlook Express or Outlook, or other CSV files

The machine import the vCard file as the following rule:

#### vCard

vCard item	Imported item
BEGIN:VCARD	
VERSION:2.1	
N:SamKawasaki;	
FN:SamKawasaki	Name
ORG:;	
TEL;WORK;VOICE:	
TEL;WORK;FAX:672-8284	Fax Number
ADR;WORK:;;;;612-8686	
EMAIL:Sam.Kawasaki@muratec.com	E-mail address
END:VCARD	

# CSV file exported from Muratec products

CSV items	Address book items
No.	Address book number
Location	Name
DialNumber	Fax Number
Mail Address	Mail Address

# CSV file exported from Outlook Express

CSV items	Address book items
Name	Name
Business Fax	Fax Number
E-mail Address	Mail Address

#### CSV file exported from Outlook

CSV items	Address book items
First Name, Middle Name and last Name	Name
Business Fax	Fax Number
E-mail Address	Mail Address

#### Other CSV files

CSV items	Address book items
No.	Address book number
Location	Name
Dial number	Fax Number
Mail address	Mail Address

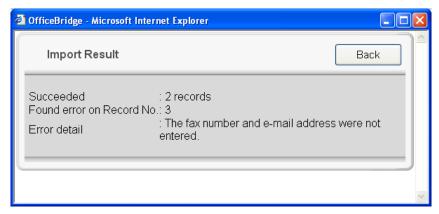
### Import results and errors

The following is the display when the import succeeded:



The imported record number will be displayed.

The following is the display when the import failed through importation:



The imported record number, the number where the error occurred and the error detail will be displayed.

Errors may occur in the following reasons:

Error message	Detail
The " " " mark were not entered correctly prior to the conversion.	The numbers of the double quotation marks were odd-number. The marks should be even-numbered in CSV files.
The fax number contains a syntax error.	Only the numeric characters and dialing characters can be registered in the fax number field.  Available characters: 1 to 9, *, #, -, /, D, F, N, P, S, T, X
The fax number exceeds 40 digits.	
The e-mail address exceeds 50 characters.	
The address book cannot store this many numbers.	The NGP cannot store more than 300 contacts. If the OfficeBridge option is installed, the numbers may differ according to the CF capacity. (1000, 1500 or 2000)
The fax number and e-mail address were not en-	The fax number or the e-mail address is a manda-
tered.	tory field the address book's data.
The address book number contains a syntax error.	The address book numbers should be specified
The specified address book number exceeds the limit.	between 1 and 300.

The specified address book number has already	It is not possible to register in the same address	
been registered.	book number.	
The information on an imported vCard(s) exceeds	In vCard file, one record should be within 512	
512 characters.	characters.	
The CSV/vCard file selected either cannot be		
recognized or is empty.		

## **Export details**

The following two file types are available as exported address book:

- vCard
- CSV

### 2.9.3 LDAP

The following topics will be covered in this section:

Setting the Search Base
Setting the Search Attributes
Search Method
The LDIFDE Command
Packet Capturing

### **Setting the Search Base**

The Search Base is used to determine the starting point within the Active Directory or other type of database for the LDAP search. Enter the Distinguished Name (DN) of the entry where you wish to begin the search. For example, search base: ou=address book, dc=muratec, dc=local would search all of the entries at or below the address book in the muratec.local directory. The following is a list of common attributes used to enter a search base:

o = Organization Nameou = Organization Name Unitdc = domain componentc = country

Please contact the system administrator for the DN to configure the LDAP search base. The search base can be configured via the web interface or from the control panel of the unit. Control Panel Access: Settings>Management>Network Settings>LDAP Settings>LDAP Server Settings> Search Base

### **Setting the Search Attributes**

The search attributes determine the information that is to be retrieved during an LDAP search. The attributes can be through the web interface or via the control panel at the following location:

Settings>Management>Network Settings>LDAP Settings>LDAP Parameter Settings

The default settings for the search attributes are as follows:

Name1 cn

Name2 commonname

Mail1 mail

Mail2 <Blank>

Fax1 facsimiletelephonenumber

Fax2 <Blank>

Tel1 telephonenumber

Tel2 <Blank>

Department1 o

Department2 ou

cn = common name

Mail = Email address

o = Organizational Unit

ou = Organizational Unit Name

In each category, the first parameter will be searched first. If an attribute is found in the directory that is being searched that matches the parameter, the associated data is shown in the search results. If a

match is not found, the second parameter is searched if one is programmed. If a match is found, the associated data is shown in the search results. Please contact the system administrator to confirm the attributes that are used in the LDAP directory search base.

Additional search attributes can also be configured via the control panel or the web interface. The attributes programmed in this location are added to the simple search string. To access via the control panel, go to the following location:

Settings>Management>Network Settings>LDAP Settings>LDAP Server Settings>Optional Setting

Once the optional setting screen has been accessed, the following items can be configured:

Attribute Choose a DN attribute

Value Item to be searched under the previous attribute

Search Method Determines the search method that will be used for the previous attribute and attribute value.

### **Search Method**

The NGP searches using a simple search method

#### Example:

The user executes a search for "Sam".

The search string is as follows:

[ | (cn=\*sam\*)(mail=\*sam\*)]

Any entry in the search base with "Sam" as part of the common name or email address will be displayed in the Search Results.

### Example 2:

The Optional Search attribute is set as follows:

Attribute=ou, Value=muratec, Search Method=Any

The user performs a search for Sam.

The search string is as follows:

[&(ou=\*muratec\*)I(cn=\*sam\*)(mail=\*mail\*)]

&= and

I = or

A search is performed for entries in the organizational unit Muratec with either a common name or email address containing Sam.

### Restriction for special characters:

Special characters such as alphabet with "umlaut" are 2-byte code characters while usual alphabet takes only one byte. Therefore in simple search method, word that exceeds 99 characters (bytes) will not be the target to be searched.

The search strings for advanced search methods cannot exceed 300 bytes. So if too many special characters are entered in the search filed, the search will not be executed and the error "LDAP reference execution error" will be displayed.

#### **LDIFDE Command**

The LDIFDE command can be used to download the active directory contents to a text file using a command line prompt;

Ex. C:\ldifde -f filename.txt -s servername

**Note:**The –s switch is not needed if you are currently logged on to the server with the active directory you wish to download.

Note: Use the -h switch to access the help menu.

The following is a sample from an active directory that was exported using the LDIFDE command:

dn: CN=John Doe,CN=Users,DC=Muratec,DC=local

changetype: add objectClass: top objectClass: person

objectClass: organizationalPerson

objectClass: user cn: John Doe

sn: Doe

givenName: John

distinguishedName: CN=John Doe,CN=Users,DC=Muratec,DC=local

instanceType: 4

whenCreated: 20050130195401.0Z whenChanged: 20050130195601.0Z

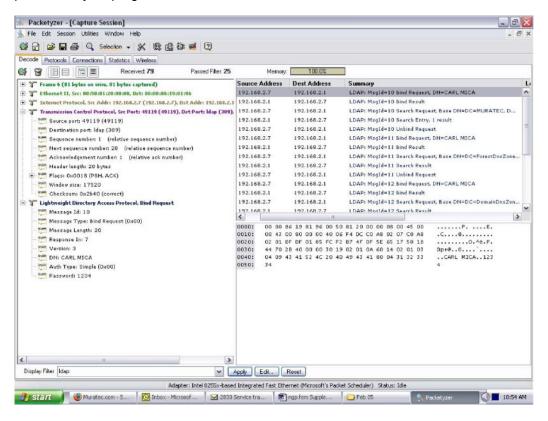
displayName: John Doe

The LDIFDE command can be very useful in determining the attributes to use when configuring the LDAP server (See "3.4.2 Setting the Search Attributes" on page 2-22).

If a search is performed and no results are returned for certain parameters, it could be that the attribute being used for the search by the NGP does not match the attributes in the Directory. To confirm, perform the LDIFDE function. Compare the attributes used in the Directory to the ones configured on the NGP. The attributes in the NGP have to match those shown in the LDIFDE file.

### **Packet Analyzer**

There are several TCP/IP packet analyzers that can be used to analyze the communication between the NGP and the Active Directory. This information can be used to determine if actual contact is being made between the NGP and the LDAP server. Below is a sample capture of a LDAP communication from a packet analyzer program.



We recommend you the two software as below:

#### 1.Ethereal

http://www.ethereal.com/

#### 2.Packetyzer

http://www.networkchemistry.com/products/packetyzer/

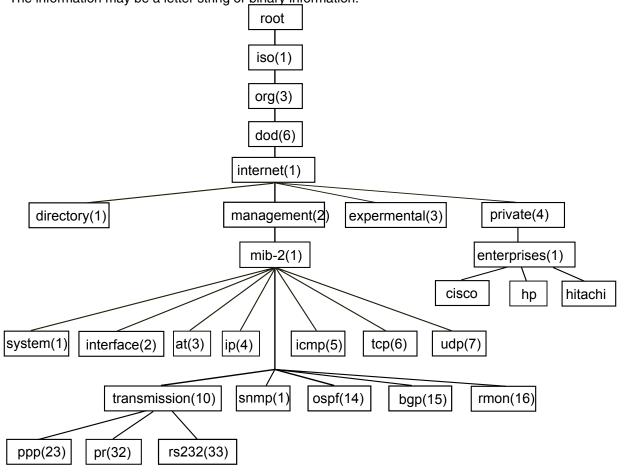
### 2.9.4 SNMP Setting

### **MIB** (Management Information base)

MIBs are regulated on RFC 2578.

There are MIBs that are provided by the manufacturers and standard MIBs that do not depend on them.

On MIB, each network equipments has the information that is called OID (Object ID). MIB is managed in a tree structure. For example, the OID for a vendor identifier may be indicated like "1.3.6.1.2.1.2". The information may be a letter string or binary information.



### **SNMP(Simple Network Management Protocol)**

SNMP is a protocol regulated by RFC 1157. It manages the network system activity on TCP/IP.

NGP corresponds to version 1. The latest version is version 3(defined by RFC3411)

SNMP is UDP (User Datagram Protocol).

A SNMP manager software such as WebJetAdmin (HP) can retrieve or rewrite information of a SNMP agent installed network equipment such as NGP by indicating one or more OID.

### The SNMP protocol

The SNMP protocol operates at the application layer (layer 7) of the OSI model. It specified (in version 1) five core protocol data units (PDUs):

GET REQUEST, is used to request the values of one or more MIB variables.

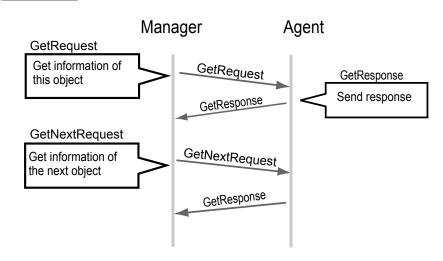
GETNEXT REQUEST, is used to read the values of variables in the MIB but sequentially. It is often used to read though a table of values. After a first read with the get-request, get-next-request are used to read through the remaining rows.

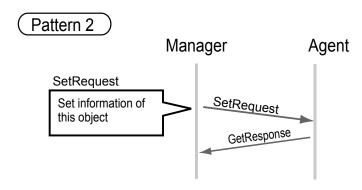
SET REQUEST, is used to update one of the MIB values.

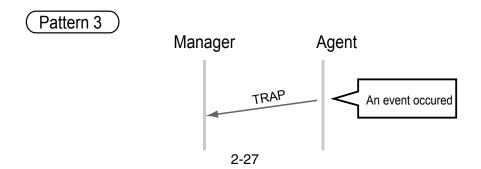
GET RESPONSE, is returned as an answer to a get-request, a get-next-request or set-request message.

TRAP, is used to support significant events (e.g. a cold or a warm restart or a link that has gone down).

### Pattern 1







# 2.9.5 e-mail gateway Initiation of the RightFax Off Ramping Function

There are 3 methods to initiate the fax forwarding (off ramping) to the RightFax Server. The adequate option is depending on the gateway setting at the RightFax server side.

1. Transmit E-mail to the dedicated domain (host.company.com) for initiating the fax forwarding (off ramping).

Example: /fax=0000/name=test@host.company.com

In this method, the dedicated domain for receiving the e-mail with fax forwarding initiation is created on the SMTP/POP3 server. The e-mail is sent to the designated e-mail box then is forwarded to the designated fax number initiated in the e-mail address field.

2. Transmit E-mail to the e-mail server that initiates the fax forwarding (off ramping).

Example: /fax=0000/name=test@company.com fax=0000@company.com

This method makes use of the e-mail server's functionality that forwards the e-mail with some certain character string in the address field to the e-mail box designated in advance.

The RightFax server receives the e-mail in the designated e-mail box mentioned above, and then forwards it to the fax number which is initiated in the e-mail address field.

3. Transmit E-mail to the e-mail address that initiates the fax forwarding (off ramping). Example: "/name=tester/fax=0000/"test@company.com

This method is used when the Server side setting means is limited.

The server only creates the e-mail box for the fax forwarding initiation, and the sender inserts the forwarding initiation character string in the "Nickname" field. It makes use of the e-mail functionality that the "Nickname" area does not affect the e-mail transmission itself and the location is described in the <e-mail address> field. The only thing the RightFax Server has to do is to set the POP reception to the created e-mail box.

### **Available Methods in NGP**

In the latest version firmware (main unit: C2A0A0, NGP board: C3A0A0) onward, you will find the [e-mail gateway] function in the [Setting]-[Fax Setting]-[Others] screen and in this setting you can set the Prefix and Suffix information. Using this function, NGP can automatically add the Prefix and Suffix information to the entered Fax number and create an e-mail address to transmit to the RightFax server.

The following 2 methods are available in the NGP to work with the RightFax server.

#### <Method A>

It is working on the method 2 of the RightFax's Off Ramping function. (see 3.6.1 Initiation of the RightFax Off Ramping Function). In this case, you need to set the Prefix and Suffix information as follows.

Prefix: fax=

Suffix: @company.com

When you enter the fax number 555-1212 on the NGP and start the transmission, the e-mail is created with the address fax=555-1212@company.com and sent to the RightFax server, then the Off Ramp function will operate.

#### <Method B>

It is working on the method 3 of the RightFax's Off Ramping function (see 3.6.1 Initiation of the RightFax Off Ramping Function).

In this case, when you want to create the e-mail address "fax=555-1212" < test04@company.com>, you need to set the Prefix and Suffix information as follows.

Prefix: "fax=

Suffix: "<test04@company.com>

When you enter the fax number 555-1212 and start transmission, the address "fax=555-1212" <test04@company.com> is created and the RightFax Server initiate the fax forwarding correctly.

**Note**: It seems that the RightFax server only forwards the first part of the e-mail initiated to forward, and the second part onward is ignored (there is no such description in the RightFax specification documents but actually it does not work).

Therefore, when sending the e-mail from NGP, note not to attach the e-mail body text, or only the body part is forwarded but the scanned documents are not forwarded.

### 2.9.6 Network server authentication

### **Network environment and protocol**

- The network authentication is a domain authentication Windows NT 4.0 Server, Windows 2000 and 2003 Server (Active Directory).
- The authentication protocol for Windows 2000 and 2003 server is Kerberos (encryption algorithm: RSA RC4) and SMB (NTLM version 2). Windows NT 4.0 Server should be SP4 or later.
- The network server is specified by the domain name.

Windows NT uses WINS and Broadcast to detect the server (domain controller).

Active Directory uses SRV record (\_ldap.\_tcp.<domain name>) of DNS to detect the server (domain controller). A DNS that contains domain controller information and is compatible with SRV record should be registered to the NGP.

 Active Directory uses LDAP to acquire user information such as e-mail address of the user from the directory.

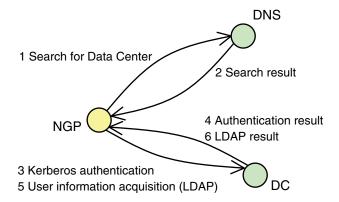


Figure 1 : Basic Authentication flow for Active Directory

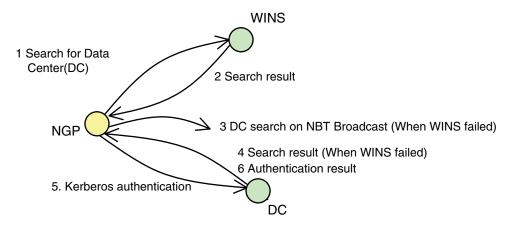


Figure 2: Basic authentication flow for Windows NT

### **LDAP**

In Active Directory, after Kerberos authentication, LDAPv3 is used to acquire the user information. RC4 is used to encrypt the password.

The search is executed with following parameter:

Search Filter:

UserPrincipalName = <user>@<domain> OR

SAMAccountName = <user>

<user> : user name

<domain>: domain name

Search Attribute:

displayName

cn

mail

telephoneNumber

facsimileTelephoneNumber

department

Bace DN: domain name

- The user's e-mail address acquired by LDAP is adopted to the "From" field of IFAX and e-mail that the logging-on-user requires. The format of "From" field shall be "displayName<mail>" or "cn<mail>". If the displayName is not acquired, cn shall be used instead.
- If the e-mail address is not acquired, the e-mail address that registered on the NGP shall be used.
- The e-mail address required by the user shall also take effect after the user has logged out.
- The LDAP server setting differs from which it is registered for LDAP search. The LDAP server shall be acquired through DNS domain controller search.
- Kerberos system shall be used only in LDAP search for authentication.

# **3 Adjustment Procedures**

## 3.1 Field Service Program Modes

The fax machine feature maintenance modes for machine adjustment. Each mode is listed below along with the command used to activate the mode and a brief functional description.

<b>Note:</b> When you press <*>, you will hear short beeps. However continue the operation, as there is no
problem.
Set or Clear Machine Parameters
Used to set or clear machine parameters.
Set or Clear Memory Switches
Used to set or clear memory switches.
Clear Programmed Data / User Settings
Erases user-programmed information (date, time, TTI, address book, etc.) and any documents stored in memory.
All RAM Clear <pre>Setting&gt;, &lt;*&gt;,&lt; 0&gt;, &lt;3&gt;</pre>
Erases same information as "Clear Programmed Data / User Settings" function along with resetting all of the machine parameters, memory switches and unique switches to factory defaults.
Set or Clear Unique Switches Setting>, <*>, <0>, <4>
Used to set or clear Unique switches.
<b>T.30 Monitor Print</b>
Used to print a G3 procedural summary of the fax communication.
Printer maintenance
Access this mode to determine the cause of the "Please Call Service" error message.
Or, when replaced the Fuser unit or Image transfer roller, reset the counter using this mode.
<b>Monitor Speaker</b>
Use to hear the signal sound with machine's speaker during fax transaction.
Test Modes
Allows the technician to perform a series of diagnostic tests.
Print Machine Parameters, Memory Switches and
Unique Switches List Setting>, <*>, <1>, <0>
Prints a list of the machine switch settings showing the default settings and current settings.
Prints a list of the machine switch settings showing the default settings and current settings.  Factory Functions
Prints a list of the machine switch settings showing the default settings and current settings.  Factory Functions
Prints a list of the machine switch settings showing the default settings and current settings.  Factory Functions
Prints a list of the machine switch settings showing the default settings and current settings.  Factory Functions
Prints a list of the machine switch settings showing the default settings and current settings.  Factory Functions
Prints a list of the machine switch settings showing the default settings and current settings.  Factory Functions
Prints a list of the machine switch settings showing the default settings and current settings.  Factory Functions
Prints a list of the machine switch settings showing the default settings and current settings.  Factory Functions
Prints a list of the machine switch settings showing the default settings and current settings.  Factory Functions
Prints a list of the machine switch settings showing the default settings and current settings.  Factory Functions
Prints a list of the machine switch settings showing the default settings and current settings.  Factory Functions
Prints a list of the machine switch settings showing the default settings and current settings.  Factory Functions
Prints a list of the machine switch settings showing the default settings and current settings.  Factory Functions
Prints a list of the machine switch settings showing the default settings and current settings.  Factory Functions
Prints a list of the machine switch settings showing the default settings and current settings.  Factory Functions
Prints a list of the machine switch settings showing the default settings and current settings.  Factory Functions
Prints a list of the machine switch settings showing the default settings and current settings.  Factory Functions
Prints a list of the machine switch settings showing the default settings and current settings.  Factory Functions

Sensor diagnostic test.

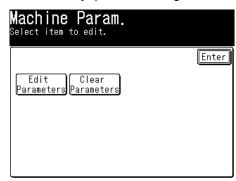
	r diagnostic mode< rinter diagnostic test.	<setting>, &lt;</setting>	<*>, <2>	>, <3>
Us	ork service mode			>, <4>
Us	econd linesecond linesed to set memory switches, unique switches, ECM mode, pause lengtl ngs for the second telephone line.	-		>, <8>
	ROM Sum check	<setting>, &lt;</setting>	<*>, <2>	>, <9>
Service	e Report setting	<setting>, &lt;</setting>	<*>, <4>	>, <2>
Us	Ised to enter location where to send the service report.			
Printer	r registration adjustment	<setting>, &lt;</setting>	<*>, <4>	>, <3>
Us	Ised to adjust the printer registration.			
Update	e the software via network	<setting>, &lt;</setting>	<*>, <9>	>, <0>
Us	Ised to upgrade the software via network.			
Update	e the software	<setting>, &lt;</setting>	<*>, <9>	>, <8>
Us	Ised to upgrade the software using the USB RomWrite application.			
Quick i	installation mode	<setting>, &lt;</setting>	<*>, <9>	>, <9>
	ou can set the initial setting mode, consumable order sheet setting and etting continuously.	service rep	ort	

## 3.2 Machine Parameter Adjustment

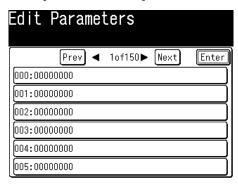
### 3.2.1 Setting the Machine Parameters

These switches are used to program internal machine parameters. The primary back up battery maintains these settings if power is lost.

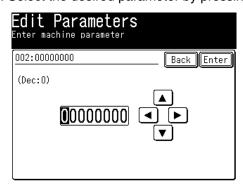
1. From standby, press <Setting>, <\*>, <0>, <0>.



2. Press [Edit Parameters].



- 3. Call up the desired switch by pressing [▼] or [▲], or by pressing the numeric keypad.
- 4. Select the desired parameter by pressing the box.



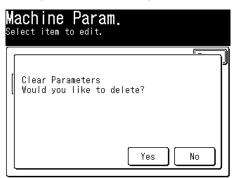
- 5. To navigate through the machine parameter settings:
  - The bits are ranged from 7 (left) to 0 (right).
  - Press [◄] or[▶] of the cursor key to move the cursor.
  - Press [0] or [1] on the numeric keypad, or [▼] or [▲], to change the bit value.
  - Press [Enter] to save the setting of the displayed parameter and return to the machine parameter edit screen.
  - Press [Back] not to save the setting of the displayed parameter.
- 6. If you want to set other machine parameters, repeat step 3-5. Otherwise, proceed to step 7.
- 7. Press <Reset> to return the machine to standby.

**Note:** You can confirm the initial setting of each Machine parameter by the Machine Parameters List. The Machine Parameters List will be printed by pressing <Setting>, <\*>, <1>, <0>.

### 3.2.2 Clearing the Machine Parameters

Resets the machine parameters to factory defaults.

- 1. From standby, press <Setting>, <\*>, <0>, <0>.
- 2. Press [Clear Parameters].



3. Press [Yes]. The machine parameters will reset to factory defaults.

Note: To finish the operation without clearing the parameters, press [No].

4. Press <Reset> to return the machine to standby.

## Machine Parameter 000 ~ 006 — Factory use only

## **Machine Parameter 007**

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Factory use only	
6	0	Factory use only	
5	0	Factory use only	
4	0	DRAM capacity indication	This switch indicates the DRAM capacity.
3	0	on the Main PCB	(This switch is read only, do not set any character)
2	0		You can see the memory capacity by how many "1"
1	0		is indicated on the LCD. One "1" means 8MB.
0	0	DRAM capacity indication on the Main PCB	For example, if three "1" are indicated, i.e. "00000111", the DRAM capacity is 8MB x 3 = 24MB.

## Machine Parameter 008 and 009 — Factory use only

Switch	Initial Setting	Adjust	Usage/Comments		
7	0	ADF scanner registration	Switch 76543210	Settings	
6	0	adjustment (Horizontal)			
5	0		127 steps 01111111	+10.76 mm	
4	0	Adjusts the start point to	:	0 = 1	
3	0	scan the document.	00100000	+2.71 mm	
2	0	The plus setting increases		. 1.00	
1	0	the left margin and the minus	00010000	+1.36 mm	
0	0	setting decreases it.	00001000	+0.68mm	
		1 step = 2 / 600 dpi	•	+0.00111111	
		(0.0847 mm)	00000000	0 mm ← Initial setting	
		,	:	J	
		Note: These values	10001000	-0.68 mm	
		are factory set and should	•		
		not be adjusted unless	10010000	-1.36 mm	
		instructed by a Muratec	:		
		technical representative.	10100000	-2.71 mm	
			: -127steps 11111111	-10.76 mm	

Switch	Initial Setting	Adjust	Usage/Comments		
7	0	Adjustment of the scanning	Switch 76543210	Settings	
6	0	stretching and squeezing for			
5	0	ADF.	00001111	+1.5 %	
4	0	(Horizontal)	:		
3	0		00001000	+0.8 %	
2	0	The plus setting stretches the	:	0.4.0/	
1	0	image data and the minus setting squeezes it.	00000100	+0.4 %	
0	0		0000010	.0.2.9/	
1 "	O	Each catting changes by	00000010	+0.2 % +0.1 %	
		Each setting changes by			
		0.1%	0000000		
			10000001	-0.1 %	
		Note: These values are	10000010	-0.2 %	
		factory set and should not be	:		
		adjusted unless instructed by	10000100	-0.4 %	
		a Muratec technical	:		
		representative.	10001000	-0.8 %	
			:		
			10001111	-1.5 %	

Switch	Initial Setting	Adjust	Usage/Comments		
7	1	Adjustment of the scanning	Switch 76543210	Settings	
6	0	stretching and squeezing for			
5	0	ADF.	00001111	+1.5 %	
4	0	(Vertical)	:		
3	1		00001000	+0.8 %	
2	1	The plus setting squeezes	:	.0.1.9/	
1	0	the image data and the minus setting stretches it.	0000001	+0.1 % 0 % ← Standard	
0	1	Tillius setting stretches it.	10000001		
		Each setting changes by	:		
		0.1%	10000100	-0.4 %	
			:		
			10001000	-0.8 %	
			:		
			<u>10001101</u>	-1.3 % ← Initial setting	
			10001111	-1.5 %	

Switch	Initial Setting	Adjust	Usag	e/Comments
7	1	Leading edge document	Switch 76543210	Settings
6	0	margin adjustment (ADF)		
5	0		127 steps 01111111	+10.76 mm
4	1	Adjusts the leading edge	:	. 0. 71
3	0	margin from Document Sensor 2 (DS2) to the start	00100000	+2.71 mm
2	0	of scanning the position.	00010000	+1.36 mm
1	0		:	11.00 11.11
0	1		00001000	+0.68mm
		1 step = 2 / 600 dpi	:	
		(0.0847 mm)	00000000	15.6 mm
			:	
		<u></u>	10001000	-0.68 mm
		Note: These values	:	1.00
		are factory set and should not be adjusted unless	10010000	-1.36 mm
		instructed by a Muratec	10100000	-2.71 mm
		technical representative.	1010000	2.7 1 111111
		15554. 159.5554	<u>10011111</u>	-5.34 mm ← Initial setting
			: -127steps 11111111	-10.76 mm

Switch	Initial Setting	Adjust	Usage/Comments		
7	0	Trailing edge document	Switch 76543210	Settings	
6	0	margin adjustment (ADF)			
5	0		127 steps 01111111	+10.76 mm	
4	0	Adjusts document feed after	:	. 0. 71	
3	1	the trailing edge of a document	00100000	+2.71 mm	
2	0	Sensor 2 (DS2).	00010000	+1.36 mm	
1	1	0011001 2 (202).	:	11.00 11	
0	0		00010011	+0.93 mm ← Initial setting	
		1 step = 2 / 600 dpi	:	_	
		(0.0847 mm)	00001000	+0.68mm	
			:		
		Note: These sections	0000000	15.6 mm	
		Note: These values	10001000	-0.68 mm	
		are factory set and should not be adjusted unless	10001000	-0.06 11111	
		instructed by a Muratec	10010000	-1.36 mm	
		technical representative.	:		
		'	10100000	-2.71 mm	
			:		
			-127steps 11111111	-10.76 mm	

Switch	Initial Setting	Adjust	Usag	e/Comments
7	1	FBS scanner registration	Switch 76543210	Settings
6	0	adjustment (Horizontal)		
5	0	Adimate the attention in the	127 steps 01111111	+10.76 mm
4	0	Adjusts the start point to scan the document.	: 00100000	+2.71 mm
3	0	The plus setting increases	•	+2.71 111111
2	0	the left margin and the minus	00010000	+1.36 mm
1	1	setting decreases it.	:	
0	0	G	00001000	+0.68mm
		1 step = 2 / 600 dpi	:	
		(0.0847 mm)	00000000	0 mm
		Mate There all as	:	0.47
		<b>Note:</b> These values are factory set and should	<u>10000010</u>	-0.17 mm ← Initial setting
		not be adjusted unless	10001000	-0.68 mm
		instructed by a Muratec	:	
		technical representative.	10010000	-1.36 mm
			:	
			10100000	-2.71 mm
			: -127steps 11111111	-10.76 mm

Switch	Initial Setting	Adjust	Usage/Comments		
7	0	Adjustment of the scanning	Switch 76543210	Settings	
6	0	stretching and squeezing for			
5	0	FBS.	00001111	+1.5 %	
4	0	(Horizontal)	;		
3	0		00001000	+0.8 %	
2	0	The plus setting stretches	:	0.4.0/	
1	0	the image data and the	00000100	+0.4 %	
0	0	minus setting squeezes it.	:	. 0. 0. 0/	
		Forth control to the control	00000010	+0.2 %	
		Each setting changes by	0000001	+0.1 %	
		0.1%	00000000		
			10000001	-0.1 %	
			10000010	-0.2 %	
			:		
			10000100	-0.4 %	
			:		
			10001000	-0.8 %	
			:		
			10001111	-1.5 %	

Switch	Initial Setting	Adjust	Usag	e/Comments
7	1	Adjustment of the scanning	Switch 76543210	Settings
6	0	stretching and squeezing for		
5	0	FBS.	00001111	+1.5 %
4	0	(Vertical)	:	
3	0	The of a series	00001000	+0.8 %
2	1	The plus setting squeezes	: 00000100	+0.4 %
1	0	the image data and the minus setting stretches it.	•	+0.4 %
0	0	Thirds setting stretches it.	00000010	+0.2 %
		Each setting changes by	0000001	
		0.1%	00000000	0 %
			10000001	-0.1 %
			10000010	-0.2 %
			:	
			<u>10000100</u>	-0.4 % ← Initial setting
			:	0.00/
			10001000	-0.8 %
			: 10001111	-1.5 %

### **Machine Parameter 018**

Switch	Initial Setting	Adjust		Usage	e/Comments
7	0	Leading edge document	Switch	76543210	Settings
6	0	margin adjustment For FBS			
5	1		127steps	01111111	+2.70 mm
4	0	Adjusts the leading edge	64 otono	:	. 1.26 mm
3	1	margin after Home Sensor OFF to the start of scanning	64 Steps	01000000	+1.36 mm
2	0	the position.	32 steps	00100000	+0.68 mm
1	0	and position.	02 0.000	:	. 6.66
0	1	Each setting changes	16 steps	00010000	+0.34 mm
		by 0.0212 mm.		:	
		<u></u>	8 steps	00001000	+0.17 mm
		Note: These values are		:	04.05 ****
		factory set and should not be adjusted unless instructed by		00000000	21.85 mm
		a Muratec technical	-8 steps	10001000	-0.17 mm
		representative.		:	
		•	-12 steps	10001100	-0.25 mm ← Initial setting
				:	
			-16 steps	10010000	-0.34 mm
			00 atama	:	0.00
			i -3∠ steps	10100000	-0.68mm
			-64 steps	11000000	-1.36 mm
			-127steps	: 111111111	-2.70mm

## Machine Parameter 019 — Factory use only

Switch	Initial Setting	Adjust		Usag	e/Comments
7	1	Mirror carriage standby	Switch	76543210	Settings
6	0	position adjustment			
5	0		127steps	01111111	+17.89 mm
4	1	Adjusts the number of the		:	44.00
3	0	steps from the home sensor	80 steps	01010000	+11.26 mm
2	1	of the mirror carriage OFF to the standby position.	50 stens	00110010	+7.04 mm
1	1	to the standby position.	30 Steps	:	+7.04 11111
0	1	1 step = 0.0212 mm	20 steps	00010100	+2.82 mm
				:	
		Note: These values	10 steps	00001010	+1.41 mm
		are factory set and should		:	
		not be adjusted unless	3 steps	00000011	+0.42 mm
		instructed by a Muratec	2 steps	00000010	+0.28 mm
		technical representative.	1 step	0000001	+0.14 mm
				00000000	9.15 mm
			When Sw	itch 7 is "1", i	it means " - ". For example,
			"1000000	1" means "-0	.14 mm".

### **Machine Parameter 021**

Switch	Initial Setting	Adjust		Usag	e/Comments
7	0	Mirror carriage transfer mode	Switch	76543210	Settings
6	0	position adjustment			
5	0		127steps	01111111	+2.70 mm
4	0	Adjusts the number of the	C4 atama	:	. 1. 00
3	0	steps from the home sensor of the mirror carriage OFF	64 steps	01000000	+1.36 mm
2	0	to the transfer mode position.	32 stens	00100000	+0.68 mm
1	0	to the transfer mede position.	OZ Otopo	:	10.00 11
0	0	1 step = 0.0212 mm	16 steps	00010000	+0.34 mm
		1 0.0p 0.02 12 111111	8 steps -8 steps -16 steps -32 steps -64 steps	: 00001000 : 00000000 : 10001000 : 10010000 : 111000000 : 111111111	+0.17 mm  21.5 mm ← Initial setting  -0.17 mm  -0.34 mm  -0.68mm  -1.36 mm  -2.70mm

Machine Parameter 022 ~ 024 — Factory use only

Switch	Initial Setting	Adjust	Usage/Comments	
7	0	Background level adjustment	Switch 76543210 Settings	
6	0	starting position		
5	0		127steps 01111111 +2.70 mm	
4	0	Adjusts the number of the	: 64 stopp01000000 +1.26 mm	
3	0	steps from the home sensor of the mirror carriage OFF	64 steps01000000 +1.36 mm	
2	0	to the background level	32 steps 00100000 +0.68 mm	
1	0	adjusting start position.	:	
0	0		16 steps 00010000 +0.34 mm	
		1 step = 0.0212 mm	1 0.0p 0.02.2 mm	8 steps 00001000 +0.17 mm :
			-16 steps 10010000 -0.34 mm : -32 steps 10100000 -0.68mm : -64 steps 11000000 -1.36 mm : -127steps 11111111 -2.70mm	

Machine Parameter 026 ~ 029 — Factory use only

Switch	Initial Setting	Adjust	U	sage/Comments
7	0	Scanning density	Switch 76543210	
6	0	level adjustment in normal	01111111	Darkest setting
5	0	resolution.	:	
4	0		00001000	
3	0			4 Initial patting
2	0		0000000	← Initial setting
1	0		10001000	
0	0		:	
			11111111	Lightest setting

### **Machine Parameter 031**

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Scanning density level	Switch 76543210
6	0	adjustment in fine resolution.	01111111 Darkest setting
5	0		:
4	0		00001000
3	0		: 00000000 ← Initial setting
2	0		• Octobro C Initial Setting
1	0		10001000
0	0		:
			11111111 Lightest setting

Switch	Initial Setting	Adjust	U	Isage/Comments
7	0	Scanning density level	Switch 76543210	
6	0	adjustment in super-fine	01111111	Darkest setting
5	0	resolution.	::	
4	0		00001000	
3	0			← Initial catting
2	0		0000000	← Initial setting
1	0		10001000	
0	0		:	
			11111111	Lightest setting

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Scanning density level	Switch 76543210
6	0	adjustment in hyper-fine	01111111 Darkest setting
5	0	resolution.	:
4	0		00001000
3	0		: 00000000 ← Initial setting
2	0		00000000 ← Initial Setting
1	0		10001000
0	0		:
			11111111 Lightest setting

### **Machine Parameter 034**

Switch	Initial Setting	Adjust	Usage/Comm	ents
7	0	Scanning density level	Switch 76543210	
6	0	adjustment in hyper-fine	01111111 Darkest set	ting
5	0	(600dpi x 600dpi) resolution.	:	
4	0		00001000	
3	0		: 00000000 ← Initial set	tina
2	0			ung
1	0		10001000	
0	0		:	
			11111111 Lightest se	tting

Machine Parameter 035 ~ 089 — Factory use only

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Able to use the bypass tray in normal fax reception.  0: Yes  1: No	When set to "1", the cassette or the bypass tray is not available in normal fax reception.  Note: This setting does not affect the duplex fax
6	0	Factory use only	reception. See Machine Parameter 092 for the
5	0	Factory use only	duplex fax reception.
4	0	Factory use only	
3	0	Factory use only	
2	0	Factory use only	
1	0	Able to use the 2nd cassette in normal fax reception. 0: Yes 1: No	
0	0	Able to use the 1st cassette in normal fax reception. 0: Yes 1: No	

## Machine Parameter 091 — Factory use only

### **Machine Parameter 092**

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Able to use the bypass tray in duplex fax reception.  0: Yes	When set to "1", the cassette or the bypass tray is not available in duplex fax reception.
6	0	1: No Factory use only	<b>Note:</b> A duplex printing unit is required for duplex reception.
5	0	Factory use only	Todopiionii
4	0	Factory use only	Note: This setting does not affect the normal fax
3	0	Factory use only	reception. See Machine Parameter 090 for the
2	0	Factory use only	normal fax reception.
1	0	Able to use the 2nd cassette in duplex fax reception. 0: Yes 1: No	
0	0	Able to use the 1st cassette in duplex fax reception. 0: Yes 1: No	

## Machine Parameter 093 ~ 099 — Factory use only

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Printer registration	
6	0	adjustment (Horizontal) at	See table on page 3-21.
5	0	the 1st cassette for printing.	
4	0	] <b>.</b>	<b>Note:</b> Set this switch after setting the margin to
3	0	Adjusts the start point to print.	"0 mm" in Unique Switch 52. Then, after setting this switch, set the margin to the initial setting (4 mm) in Unique Switch 52.
2	0		
1	0	The plus setting increases	min) in Onique Switch 32.
0	0	the left margin and the minus setting decreases it.  The setting changes by 16 dots (0.6773 mm).	

### **Machine Parameter 101**

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Printer registration adjust-	
6	0	ment (Horizontal) at	See table on page 3-21.
5	0	the 2nd cassette for printing.	
4	0	A di cata dia a da di cata da	<b>Note:</b> Set this switch after setting the margin to
3	0	Adjusts the start point to print.	"0 mm" in Unique Switch 52. Then, after setting this switch, set the margin to the initial setting (4 mm) in Unique Switch 52.
2	0		
1	0	The plus setting increases	Tillity in Onique Switch 32.
0	0	the left margin and the minus setting decreases it.  The setting changes by 16 dots (0.6773 mm).	

## Machine Parameter 102 ~ 106 — Factory use only

Switch	Initial Setting	Adjust	Usage/Comments
7	1	Printer registration	
6	1	adjustment (Horizontal) at	See table on page 3-21.
5	1	the Bypass tray for printing.	
4	1		<b>Note:</b> Set this switch after setting the margin to
3	1	Adjusts the start point to	"0 mm" in Unique Switch 52. Then, after setting
2	0	print.	this switch, set the margin to the initial setting (4
1	0	The plus cetting in avecage	mm) in Unique Switch 52.
0	1	The plus setting increases the left margin and the minus setting decreases it.  The setting changes by 16 dots (0.6773 mm).	

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Printer registration	
6	0	adjustment (Horizontal) for	See table on page 3-21.
5	0	duplex printing cassette.	
4	0	A di cata dia a da di cata da	<b>Note:</b> Set this switch after setting the margin to
3	0	Adjusts the start point to	"0 mm" in Unique Switch 52. Then, after setting
2	1	print.	this switch, set the margin to the initial setting (4 mm) in Unique Switch 52.
1	1	The plus setting increases	min) in onique owner 52.
0	1	the left margin and the minus setting decreases it.  The setting changes by 16 dots (0.6773 mm).	

Machine Parameter 109 ~ 139 — Factory use only

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Printer registration	
6	0	adjustment.	See table on page 3-21.
5	0		
4	0	Adjusts the left margin at the	Note: The surrounding margin (right / left / top /
3	0	1st cassette for printing.	bottom) is set in Unique Switch 52. If you want to
2	0	The plus setting increases	adjust only left margin, adjust it in this switch.
1	0	the left margin and the minus	
0	0	setting decreases it.	
		3	
		The setting changes by	
		16 dots (0.6773 mm).	

### **Machine Parameter 141**

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Printer registration	
6	0	adjustment.	See table on page 3-21.
5	0		
4	0	Adjusts the left margin at the	Note: The surrounding margin (right / left / top /
3	0	2nd cassette for printing.	bottom) is set in Unique Switch 52. If you want to adjust only left margin, adjust it in this switch.
2	0	The plus setting increases	aujust only left margin, aujust it in this switch.
1	0	the left margin and the minus	
0	0	setting decreases it.	
		The setting changes by 16 dots (0.6773 mm).	

Machine Parameter 142 ~ 146 — Factory use only

Switch	Initial Setting	Adjust	Usage/Comments
7	1	Printer registration	
6	1	adjustment.	See table on page 3-21.
5	1		
4	1	Adjusts the left margin at the	Note: The surrounding margin (right / left / top /
3	1	Bypass tray for printing.	bottom) is set in Unique Switch 52. If you want to
2	0	The plus setting increases	adjust only left margin, adjust it in this switch.
1	0	the left margin and the minus	
0	1	setting decreases it.	
		The setting changes by 16 dots (0.6773 mm).	

### **Machine Parameter 148**

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Printer registration	
6	0	adjustment.	See table on page 3-21.
5	0		<u> </u>
4	0	Adjusts the left margin for duplex printing cassette.	<b>Note:</b> The surrounding margin (right / left / top / bottom) is set in Unique Switch 52. If you want to adjust only left margin, adjust it in this switch.
3	0		
2	1	The plus setting increases	aujust only left margin, aujust it in this switch.
1	1	the left margin and the minus setting decreases it.	
0	1		
		The setting changes by 16 dots (0.6773 mm).	

Machine Parameter 149 ~ 159 — Factory use only

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Printer registration	
6	0	adjustment.	See table on page 3-21.
5	0		
4	0	Adjusts the right margin at	Note: The surrounding margin (right / left / top /
3	0	the 1st cassette for printing.	bottom) is set in Unique Switch 52. If you want to
2	0	The plus setting decreases	adjust only right margin, adjust it in this switch.
1	0	the right margin and the minus setting increases it.	
0	0		
		The setting changes by 16 dots (0.6773 mm).	

### **Machine Parameter 161**

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Printer registration	
6	0	adjustment.	See table on page 3-21.
5	0		<u> </u>
4	0	Adjusts the right margin at	Note: The surrounding margin (right / left / top /
3	0	the 2nd cassette for printing.	bottom) is set in Unique Switch 52. If you want to adjust only right margin, adjust it in this switch.
2	0	The plus setting decreases	adjust only right margin, adjust it in this switch.
1	0	the right margin and the minus setting increases it.	
0	0		
		The setting changes by 16 dots (0.6773 mm).	

Machine Parameter 162 ~ 166 — Factory use only

Switch	Initial Setting	Adjust	Usage/Comments
7	1	Printer registration	
6	1	adjustment.	See table on page 3-21.
5	1		
4	1	Adjusts the right margin at	Note: The surrounding margin (right / left / top /
3	1	the Bypass tray for printing.	bottom) is set in Unique Switch 52. If you want to
2	0	The plus setting decreases	adjust only right margin, adjust it in this switch.
1	0	the right margin and the	
0	1	minus setting increases it.	
		The setting changes by 16 dots (0.6773 mm).	

### **Machine Parameter 168**

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Printer registration	
6	0	adjustment.	See table on page 3-21.
5	0		<b></b>
4	0	Adjusts the right margin for duplex printing cassette.	<b>Note:</b> The surrounding margin (right / left / top / bottom) is set in Unique Switch 52. If you want to adjust only right margin, adjust it in this switch.
3	0		
2	1	The plus setting decreases	adjust offiny fight margin, adjust it in this switch.
1	1	the right margin and the minus setting increases it.	
0	1		
		The setting changes by 16 dots (0.6773 mm).	

Machine Parameter 169 ~ 179 — Factory use only

## Adjusting the print margin

Switch(76543210)	Settings
01111111	+12.87mm
01111110	+11.52 mm
01100101	+10.84 mm
01100110	+10.16 mm
01011111	+9.48 mm
01011000	+8.81 mm
01010010	+8.13 mm
01001011	+7.45 mm
01000100	+6.77 mm
00111101	+6.10 mm
00110111	+5.42 mm
0011000	+4.74 mm
00101001	+4.06 mm
00010010	+3.39 mm
00011011	+2.71 mm
00010101	+2.03 mm
00001111	+1.36 mm
00000111	+0.68 mm
00000000	0 mm
11110011	-0.68 mm
11101100	-1.36 mm
11100101	-2.03 mm
11011110	-2.71 mm
11011000	-3.39 mm
11010001	-4.06 mm
11001010	-4.74 mm
11000011	-5.42 mm
10111101	-6.10 mm
10110110	-6.77 mm
10101111	-7.45 mm
10101000	-8.13 mm
10100010	-8.81 mm
10011011	-9.48 mm
10010100	-10.16 mm
10010011	-10.84 mm
10000110	-11.52 mm
1000000	-12.87 mm

Switch	Initial Setting	Adjust	Usage/Comments			
7	0	Printer registration	Switch	76543210	Settings	
6	0	adjustment (Vertical) at the				
5	0	1st cassette for printing.	127 steps	01111111	+12.7 mm	
4	0	A dissala da a ataut u a int ta	00 -1	:	. 0. 0	
3	0	Adjusts the start point to	32 steps	00100000	+3.2 mm	
2	0	print.	16 steps	00010000	+1.6 mm	
1	0	The plus setting increases	10 01000	:	11.6 11	
0	0	the top margin and the minus setting decreases it.	8 steps	00001000	+0.8 mm	
				00000000	0 mm ← Initial setting	
		Each setting changes by				
		0.1 mm.	<b>Note:</b> Set this switch after setting the margin to "0 mm" in Unique Switch 52. Then, after setting this switch, set the margin to the initial setting (4 mm) in Unique Switch 52.			

Switch	Initial Setting	Adjust	Usage/Comments		
7	0	Printer registration	Switch	76543210	Settings
6	0	adjustment (Vertical) at the			
5	0	2nd cassette for printing.	127 steps	01111111	+12.7 mm
4	0	A di cata dia a da di cata da	00	:	0.0
3	1 0 1	Adjusts the start point to	32 steps	00100000	+3.2 mm
2	0	print.	16 steps	00010000	+1.6 mm
1	0	The plus setting increases	10 31603	•	+1.0 11111
0	0	the top margin and the minus setting decreases it.	8 steps	00001000	+0.8 mm
				00000000	0 mm ← Initial setting
		Each setting changes by			
		0.1 mm.	<b>Note:</b> Set this switch after setting the margin to "0 mm" in Unique Switch 52. Then, after setting this switch, set the margin to the initial setting (4 mm) in Unique Switch 52.		

## Machine Parameter 182 ~ 186 — Factory use only

## **Machine Parameter 187**

Switch	Initial Setting	Adjust	Usage/Comments			
7	0	Printer registration	Switch	76543210	Settings	
6	0	adjustment (Vertical) at the				
5	0	Bypass tray for printing.	127 steps	01111111	+12.7 mm	
4	0		00 -1	:	. 0. 0	
3	0	Adjusts the start point to	32 steps	00100000	+3.2 mm	
2	0	print.	16 steps	00010000	+1.6 mm	
1	0	The plus setting increases	To stops	:	11.0 11111	
0	0	the top margin and the minus setting decreases it.	8 steps	00001000	+0.8 mm	
				00000000	0 mm ← Initial setting	
		Each setting changes by				
		0.1 mm.	<b>Note:</b> Set this switch after setting the margin to "0 mm" in Unique Switch 052. Then, after setting this switch, set the margin to the initial setting (4 mm) in Unique Switch 52.			

### **Machine Parameter 188**

Switch	Initial Setting	Adjust	Usage/Comments			
7	0	Printer registration	Switch	76543210	Settings	
6	0	adjustment (Vertical) for				
5	0	duplex printing cassette.	127 steps	01111111	+12.7 mm	
4	0	A dissala da a ataut u a int ta	00 -1	:	. 0. 0	
3	0	Adjusts the start point to	32 steps	00100000	+3.2 mm	
2	0	print.	16 steps	00010000	+1.6 mm	
1	0	The plus setting increases	10 31003	:	+1.0 11111	
0	0	the top margin and the minus setting decreases it.	8 steps	00001000	+0.8 mm	
		G		00000000	0 mm ← Initial setting	
		Each setting changes by				
		0.1 mm.	<b>Note:</b> Set this switch after setting the margin to "0 mm" in Unique Switch 052. Then, after setting this switch, set the margin to the initial setting (4 mm) in Unique Switch 52.			

## Machine Parameter 189 ~ 219 — Factory use only

Switch	Initial Setting	Adjust	Usage/Comments		
7	0	Printer registration	Switch	76543210	Settings
6	0	adjustment.			
5	0		127 steps	01111111	+12.7 mm
4	0	Adjusts the top margin at the	00 -1	:	0.0
3	0	1st cassette for printing.	32 steps	00100000	+3.2 mm
2	0	The plus setting increases	16 steps	00010000	+1.6 mm
1	0	the top margin and the minus	To stops	:	11.0 11111
0	0	setting decreases it.	8 steps	00001000	+0.8 mm
		Each setting changes by 0.1 mm.		00000000	4 mm ← Initial setting
			<b>Note:</b> The surrounding margin (right / left / top / bottom) is set in Unique Switch 52. If you want to adjust only top margin, adjust it in this switch.		

Switch	Initial Setting	Adjust	Usage/Comments		
7	0	Printer registration	Switch	76543210	Settings
6	0	adjustment.			
5	0		127 steps	01111111	+12.7 mm
4	0	Adjusts the top margin at the	00 -1	:	0.0
3	0	2nd cassette for printing.	32 steps	00100000	+3.2 mm
2	0	The plus setting increases	16 steps	00010000	+1.6 mm
1	0	the top margin and the minus setting decreases it.	10 31603	•	+1.0 mm
0	0		8 steps	00001000	+0.8 mm
		Each setting changes by 0.1 mm.		00000000	4 mm ← Initial setting
			<b>Note:</b> The surrounding margin (right / left / top / bottom) is set in Unique Switch 52. If you want to adjust only top margin, adjust it in this switch.		

# Machine Parameter 222 ~ 226 — Factory use only

# **Machine Parameter 227**

Switch	Initial Setting	Adjust		Usage/C	Comments
7	0	Printer registration	Switch	76543210	Settings
6	0	adjustment.			
5	0		127 steps	01111111	+12.7 mm
4	0	Adjusts the top margin at the	00 -1	:	. 0 0
3	0	Bypass tray for printing.	32 steps	00100000	+3.2 mm
2	0	The plus setting increases	16 steps	00010000	+1.6 mm
1	0	the top margin and the minus	To stops	:	11.0 11
0	0	setting decreases it.	8 steps	00001000	+0.8 mm
		Each setting changes by 0.1 mm.		00000000	4 mm ← Initial setting
			Note: The surrounding margin (right / left / top / bottom) is set in Unique Switch 52. If you want to adjust only top margin, adjust it in this switch.		

### **Machine Parameter 228**

Switch	Initial Setting	Adjust		Usage/C	Comments
7	0	Printer registration	Switch	76543210	Settings
6	0	adjustment.			
5	0	]	127 steps	01111111	+12.7 mm
4	0	Adjusts the top margin for	00 -1	:	0.0
3	0	duplex printing cassette.	32 steps	00100000	+3.2 mm
2	0	The plus setting increases	16 steps	00010000	+1.6 mm
1	0	the top margin and the minus	10 31603	•	+1.0 mm
0	0	setting decreases it.	8 steps	00001000	+0.8 mm
		Each setting changes by 0.1 mm.		00000000	4 mm ← Initial setting
			<b>Note:</b> The surrounding margin (right / left / top / bottom) is set in Unique Switch 52. If you want to adjust only top margin, adjust it in this switch.		

Machine Parameter 229 ~ 239 — Factory use only

Switch	Initial Setting	Adjust		Usage/C	comments
7	0	Printer registration	Switch	76543210	Settings
6	0	adjustment.			
5	0	Adimete the bettern measure of	127 steps	01111111	+12.7 mm
4	0	Adjusts the bottom margin at the 1st cassette for printing.	32 steps	: 00100000	+3.2 mm
3	0	the 1st cassette for printing.	oz sieps	•	+5.2 11111
2	0	The plus setting decreases	16 steps	00010000	+1.6 mm
1	0	the bottom margin and the		:	
0	0	minus setting increases it.	8 steps	00001000	+0.8 mm
		Each setting changes by		: 00000000 :	4 mm ← Initial setting
			-8 steps	11110111	-0.8 mm
			-16 steps	11101111	-1.6 mm
			-128 steps	10000000	-12.8 mm
			Note: The surrounding margin (right / left / top / bottom) is set in Unique Switch 52. If you want to adjust only bottom margin, adjust it in this switch.		

Switch	Initial Setting	Adjust		Usage/C	omments
7	0	Printer registration	Switch	76543210	Settings
6	0	adjustment.			
5	0		127 steps	01111111	+12.7 mm
4	0	Adjusts the bottom margin at	00 -1	:	0.0
3	0	the 2nd cassette for printing.	32 steps	00100000	+3.2 mm
2	0	The plus setting decreases	16 steps	00010000	+1.6 mm
1	0	the bottom margin and the	10 31003	:	+1.0 11111
0	0	minus setting increases it.	8 steps	00001000	+0.8 mm
		Each setting changes by 0.1 mm.		: 00000000 :	4 mm ← Initial setting
			-8 steps	11110111	-0.8 mm
			-16 steps	: 11101111 :	-1.6 mm
			-128 steps	10000000	-12.8 mm
			bottom) is s	et in Unique S	argin (right / left / top / Switch 52. If you want to n, adjust it in this switch.

# Machine Parameter 242 ~ 246 — Factory use only

### **Machine Parameter 247**

Switch	Initial Setting	Adjust		Usage/C	comments
7	0	Printer registration	Switch	76543210	Settings
6	0	adjustment.			
5	0	Adimete the bettern measure of	127 steps	01111111	+12.7 mm
4	0	Adjusts the bottom margin at the Bypass tray for printing.	32 steps	: 00100000	+3.2 mm
3	0	the bypass tray for printing.	32 Steps	•	+3.2 11111
2	0	The plus setting decreases	16 steps	00010000	+1.6 mm
1	0	the bottom margin and the		:	
0	0	minus setting increases it.	8 steps	00001000	+0.8 mm
		Each setting changes by		: 00000000 :	4 mm ← Initial setting
			-8 steps	11110111	-0.8 mm
			-16 steps	11101111	-1.6 mm
			-128 steps	10000000	-12.8 mm
			Note: The surrounding margin (right / left / top / bottom) is set in Unique Switch 52. If you want to adjust only bottom margin, adjust it in this switch.		

#### **Machine Parameter 248**

Switch	Initial Setting	Adjust		Usage/C	Comments
7	0	Printer registration	Switch	76543210	Settings
6	0	adjustment.			
5	0		127 steps	01111111	+12.7 mm
4	0	Adjusts the top margin for		:	
3	0	duplex printing cassette.	32 steps	00100000	+3.2 mm
2	0	The plus setting increases	16 steps	00010000	+1.6 mm
1	0	the top margin and the minus	10 steps	•	+1.0 11111
0	0	setting decreases it.	8 steps	00001000	+0.8 mm
		Each setting changes by 0.1 mm.		: 00000000 :	4 mm ← Initial setting
			-8 steps	11110111	-0.8 mm
			-16 steps	: 11101111 :	-1.6 mm
			-128 steps	10000000	-12.8 mm
			bottom) is s	et in Unique S	argin (right / left / top / Switch 52. If you want to djust it in this switch.

Machine Parameter 249 ~ 284 — Factory use only

Switch	Initial Setting	Adjust	Usage/Comments		
7	0	Current adjustment for	When transfer problems occur, adjust this param-		
6	0	standard paper front side	eter.		
5	0		Switch	76543210	Settings
4	0		04 -1	00011111	0.44 A
3	0	The plus cetting increases	31 steps	00011111	+3.41 μΑ
2	0	The plus setting increases the current and the minus	8 steps	: 00001000	+0.88 μΑ
1	0	setting decreases it.	o steps	•	+0.00 μΑ
0	0			00000000	0 μA ← Initial setting
		Each setting changes by	-1 steps	10000001	-0.11 μΑ
		0.11 μΑ.	-2 steps	10000010	-0.22 μA
				:	
			-8 steps	10001000	-0.88 μΑ
			-31 steps	: 10011111	-3.41 μA
					J
			When Swite	ch 7 is "1", it m	neans " - ". For example,
			"10000001"	' means "-0.11	I μΑ".
			Note:		
			1	them too man	y steps affect the print
					ease one or two steps at
			first.	, 40010	
			DO NOT a smaller th.		os larger than 31 or

Macilii	o i ai aii	leter 286			
Switch	Initial Setting	Adjust		Usage/C	Comments
7	0	Current adjustment for	When trans	fer problems	occur, adjust this
6	0	envelops	parameter.		
5	0		Switch	76543210	Settings
4	0		01 0100	00011111	.0.44 A
3	0	The plue cetting increases	31 steps	00011111	+3.41 μΑ
2	0	The plus setting increases the current and the minus	8 steps	00001000	+0.88 μΑ
1	0	setting decreases it.	o steps	•	+0.00 μΑ
0	0	coming decreases in		0000000	0 μA ← Initial setting
		Each setting changes by	-1 steps	10000001	-0.11 μΑ
		0.11 μΑ.	-2 steps	10000010	-0.22 μA
				:	
			-8 steps	10001000	-0.88 μΑ
				:	0.44
			-31 steps	10011111	-3.41 μΑ
			Whon Swite	ob 7 ic "1" it m	neans " - ". For example,
				' means "-0.11	
			10000001	means o.m	μΑ.
			Note:		
					y steps affect the print
			quality. Ju   first.	isi iry to decre	ease one or two steps at
				adiust the ster	os larger than 31 or
			smaller th		

Switch	Initial Setting	Adjust	Usage/Comments		
7	0	Current adjustment for	When trans	fer problems	occur, adjust this
6	0	postcards	parameter.	•	
5	0		Switch	76543210	Settings
4	0				
3	0		31 steps	00011111	+3.41 μΑ
2	0	The plus setting increases the current and the minus	Q otopo	: 00001000	. 0. 99 4
1	0	setting decreases it.	8 steps		+0.88 μΑ
0	0	Setting decreases it.		00000000	0 μA ← Initial setting
		Each setting changes by	-1 steps	10000001	-0.11 μA
		0.11 μΑ.	-2 steps	10000010	-0.22 μA
		•	'	:	·
			-8 steps	10001000	-0.88 μA
				:	
			-31 steps	10011111	-3.41 μA
					neans " - ". For example,
			"10000001"	means "-0.11	μ <b>A</b> ".
			Note:		
			1	tham too man	v atona offeat the print
			Adjusting them too many steps affect the print quality. Just try to decrease one or two steps at first.		
			1 •	adiust the ster	os larger than 31 or
			smaller tha		, c .a.goa 01 01
				- <del></del>	

Switch	Initial Setting	Adjust		Usage/C	Comments	
7	0	Current adjustment for	When trans	When transfer problems occur, adjust		
6	0	transparency sheets (OHP)	this parame	eter.	•	
5	0		Switch	76543210	Settings	
4	0		04	0004444	0.44	
3	0	The plus patting in average	31 steps	00011111	+3.41 μΑ	
2	0	The plus setting increases the current and the minus	8 steps	: 00001000	+0.88 μΑ	
1	0	setting decreases it.	0 31003	:	+0.00 μΑ	
0	0			00000000	0 μA ← Initial setting	
		Each setting changes by	-1 steps	10000001	-0.11 μA	
		0.11 μΑ.	-2 steps	10000010	-0.22 μA	
				:		
			-8 steps	10001000	-0.88 μΑ	
				:		
			-31 steps	10011111	-3.41 μΑ	
			When Switch 7 is "1", it means " - ". For example, "10000001" means "-0.11 $\mu$ A".			
			<ul> <li>Note:</li> <li>Adjusting them too many steps affect the print quality. Just try to decrease one or two steps a first.</li> <li>DO NOT adjust the steps larger than 31 or smaller than -31.</li> </ul>			

Switch	Initial Setting	Adjust		Usage/C	Comments
7	0	Current adjustment for	When trans	fer problems	occur, adjust this param-
6	0	standard paper back side	eter.		
5	0		Switch	76543210	Settings
4	0			00011111	
3	0	The plus patting in an accept	31 steps	00011111	+3.41 μΑ
2	0	The plus setting increases the current and the minus	8 steps	: 00001000	+0.88 μΑ
1	0	setting decreases it.	o steps	•	+0.00 μΛ
0	0	detailing deoleases it.		00000000	0 μA ← Initial setting
		Each setting changes by	-1 steps	10000001	-0.11 μA
		0.11 μΑ.	-2 steps	10000010	-0.22 μA
				:	·
			-8 steps	10001000	-0.88 μΑ
				:	_
			-31 steps	10011111	-3.41 μΑ
			Mile e e Conside	.l. 7 : . "4" :	
				cn 7 is "1", it m ' means "-0.11	neans " - ". For example, ⊔ μΑ".
			Note:		
			Adjusting	them too man	y steps affect the print
				st try to decre	ase one or two steps at
			first.		
					os larger than 31 or
			smaller th	an -31	

Machine Parameter 290 ~ 459 — Factory use only

Switch	Initial Setting	Adjust		Usage/Comments
7	1	White balance adjustment	Switch	76543210
6	0			
5	0	Copy/Black and white scan	16 steps	00010000 + Darkest setting
4	0	mode	Q otopo	: 00001000
3	0	Resolution: 600x600dpi Document type: Text	8 steps	
2	1	Document type: Text	4 steps	0000100
1	1			:
0	0		0 step	00000000 ← Standard
				:
			-4 step	10000100
			0 oton	:
			-8 step	10001000
			-16step	10010000 Lightest setting
			460, 493(cd	ep is the sum of Machine parameter ommon steps for copy steps), and 492 However the steps cannot exceed –16

Switch	Initial Setting	Adjust		Usage/Comments
7	0	White balance adjustment	Switch	76543210
6	0			
5	0	Copy/Black and white scan	16 steps	00010000 + Darkest setting
4	0	mode	0 -1	:
3	0	Resolution: 600x600dpi Document type: Photo/Text	8 steps	00001000
2	0	Contrast: Dark, Darker, Light,	4 steps	0000100
1	0	Lighter	Clope	:
0	0	3	0 step	00000000 ← Standard
				:
			-4 step	10000100
				:
			-8 step	10001000
			-16step	10010000 Lightest setting
			461, 493(cd	ep is the sum of Machine parameter ommon steps for copy steps), and 492 However the steps cannot exceed -16

Switch	Initial Setting	Adjust		Usage/Comments
7	0	White balance adjustment	Switch	76543210
6	0			
5	0	Copy/Black and white scan	16 steps	00010000 + Darkest setting
4	0	mode	9 otopo	: 00001000
3	0	Resolution: 600x600dpi Document type: Photo/Text	8 steps	
2	0	Contrast: Normal	4 steps	00000100
1	0			:
0	0		0 step	00000000 ← Standard
				:
			-4 step	10000100
			-8 step	: 10001000
			'	:
			-16step	10010000 Lightest setting
			462, 493(co	tep is the sum of Machine parameter common steps for copy steps), and 492 . However the steps cannot exceed -16

Switch	Initial Setting	Adjust		Usage/Comments
7	0	White balance adjustment	Switch	76543210
6	0			
5	0	Copy/Black and white scan	16 steps	00010000 + Darkest setting
4	0	mode Resolution: 600x600dpi	8 steps	: 00001000
3	0	Document type: Photo	o sieps	
2	0	Boodinent type: 1 note	4 steps	00000100
1	0			:
0	0		0 step	00000000 ← Standard
			-4 step	: 10000100 :
			-8 step	10001000
			-16step	10010000 Lightest setting
			463, 493(cd	rep is the sum of Machine parameter common steps for copy steps), and 492 . However the steps cannot exceed –16

Switch	Initial Setting	Adjust		Usage/Comments
7	1	White balance adjustment	Switch	76543210
6	0			
5	0	Copy mode	16 steps	00010000 + Darkest setting
4	0	Resolution: 600x300dpi	Q otopo	: 00001000
3	0	Document type: Text	8 steps	
2	1		4 steps	0000100
1	1			:
0	0		0 step	00000000 ← Standard
				:
			-4 step	10000100
			0 oton	:
			-8 step	10001000
			-16step	10010000 Lightest setting
			464, 493(cd	ep is the sum of Machine parameter ommon steps for copy steps), and 492 However the steps cannot exceed –16

Switch	Initial Setting	Adjust		Usage/Comments
7	0	White balance adjustment	Switch	76543210
6	0			
5	0	Copy mode	16 steps	00010000 + Darkest setting
4	0	Resolution: 600x300dpi Document type: Photo/Text	8 steps	: 00001000
3	0	Contrast: Dark, Darker, Light,	o steps	
2	0	Lighter	4 steps	00000100
1	0			:
0	0		0 step	00000000 ← Standard
			-4 step	: 10000100 :
			-8 step	10001000
			-16step	10010000 Lightest setting
			465, 493(cd	ep is the sum of Machine parameter ommon steps for copy steps), and 492 . However the steps cannot exceed –16

Switch	Initial Setting	Adjust		Usage/Comments
7	0	White balance adjustment	Switch	76543210
6	0			
5	0	Copy mode	16 steps	00010000 + Darkest setting
4	0	Resolution: 600x300dpi Document type: Photo/Text	8 steps	: 00001000
3	0	Contrast: Normal	o sieps	•
2	0	Contract: Normal	4 steps	00000100
1	0			:
0	0		0 step	00000000 ← Standard
			466, 493(cd (ADF only).	: 10000100 : 10001000 : 10010000 Lightest setting rep is the sum of Machine parameter rommon steps for copy steps), and 492 . However the steps cannot exceed –16
			or 16.	

Switch	Initial Setting	Adjust		Usage/Comments
7	0	White balance adjustment	Switch	76543210
6	0			
5	0	Copy mode	16 steps	00010000 + Darkest setting
4	0	Resolution: 600x300dpi Document type: Photo	8 steps	: 00001000
3	0	Document type. Frioto	o steps	
2	0		4 steps	00000100
1	0		<u>'</u>	:
0	0		0 step	00000000 ← Standard
			-4 step	: 10000100
			-8 step	10000100
			-16step	10000100 Lightest setting
			467, 493(cd	ep is the sum of Machine parameter ommon steps for copy steps), and 492 However the steps cannot exceed –16

Switch	Initial Setting	Adjust		Usage/Comments
7	0	White balance adjustment	Switch	76543210
6	0			
5	0	Black and White scan	16 steps	00010000 + Darkest setting
4	0	Resolution: 300x300 dpi, 200x200dpi	8 steps	: 00001000
3	0	Document type: Text	o steps	•
2	0	Boodinent type. Text	4 steps	00000100
1	0			:
0	0		0 step	00000000 ← Standard
			-4 step	: 10000100
			-8 step	10001000
			-16step	10010000 Lightest setting
				tep is the sum of Machine parameter 92 (ADF only). However the steps cannot 6 or 16.

Switch	Initial Setting	Adjust		Usage/Comments
7	0	White balance adjustment	Switch	76543210
6	0			
5	0	Black and White scan	16 steps	00010000 + Darkest setting
4	0	Resolution: 300x300 dpi,	8 steps	: 00001000
3	0	Document type: Photo/Text	o steps	
2	0	Contrast: Dark, Darker, Light,	4 steps	00000100
1	0	Lighter		:
0	0		0 step	00000000 ← Standard
				: 10000100 : 10001000 : 10010000 Lightest setting ep is the sum of Machine parameter 2 (ADF only). However the steps cannot 6 or 16.

Switch	Initial Setting	Adjust		Usage/Comments
7	0	White balance adjustment	Switch	76543210
6	0			
5	0	Black and White scan	16 steps	00010000 + Darkest setting
4	0	Resolution: 300x300 dpi,	9 otopo	: 00001000
3	0	200x200dpi Document type: Photo/Text	8 steps	
2	0	Contrast: Normal	4 steps	00000100
1	0			:
0	0		0 step	00000000 ← Standard
			-4 step	: 10000100
			-4 Step	:
			-8 step	10001000
			-16step	10010000 Lightest setting
				tep is the sum of Machine parameter 92 (ADF only). However the steps cannot 6 or 16.

Switch	Initial Setting	Adjust		Usage/Comments
7	0	White balance adjustment	Switch	76543210
6	0			
5	0	Black and White scan	16 steps	00010000 + Darkest setting
4	0	Resolution: 300x300 dpi, 200x200dpi	8 steps	: 00001000
3	0	Document type: Photo	o steps	
2	0	Boodinent type. I floto	4 steps	00000100
1	0		'	:
0	0		0 step	00000000 ← Standard
				: 10000100 : 10001000 : 10010000 Lightest setting ep is the sum of Machine parameter 2 (ADF only). However the steps cannot
			exceed –16	•

Switch	Initial Setting	Adjust		Usage/Comments
7	0	White balance adjustment	Switch	76543210
6	0			
5	0	Color scan	16 steps	00010000 + Darkest setting
4	0	Resolution: All	8 steps	: 00001000
3	0		o steps	•
2	0		4 steps	00000100
1	0			:
0	0		0 step	00000000 ← Standard
			-4 step	: 10000100 :
			-8 step	10001000
				: 10010000 Lightest setting tep is the sum of Machine parameter 02 (ADF only). However the steps cannot 6 or 16.

Switch	Initial Setting	Adjust		Usage/Comments
7	0	White balance adjustment	Switch	76543210
6	0			
5	0	Grayscale scan	16 steps	00010000 + Darkest setting
4	0		8 steps	: 00001000
3	0	Resolution: All	o steps	
2	0		4 steps	00000100
1	0		'	:
0	0		0 step	00000000 ← Standard :
			-4 step	10000100
			-8 step	10001000
			-16step	10010000 Lightest setting
				ep is the sum of Machine parameter 2 (ADF only). However the steps cannot or 16.

Switch	Initial Setting	Adjust		Usage/Comments
7	0	White balance adjustment	Switch	76543210
6	0			
5	0	Fax mode	16 steps	00010000 + Darkest setting
4	0		O otopo	: 00001000
3	0	Document type: Normal, Fine, Super fine	8 steps	
2	0	Tille, Super lille	4 steps	0000100
1	0			:
0	0		0 step	00000000 ← Standard
				:
			-4 step	10000100
			_	:
			-8 step	10001000
			-16step	10010000 Lightest setting
				ep is the sum of Machine parameter 2 (ADF only). However the steps cannot 5 or 16.

Switch	Initial Setting	Adjust		Usage/Comments
7	0	White balance adjustment	Switch	76543210
6	0			
5	0	Fax mode	16 steps	00010000 + Darkest setting
4	0	Document type: Gray scale	O otopo	:
3	0		8 steps	00001000
2	0		4 steps	0000100
1	0		1010 20	:
0	0		0 step	00000000 ← Standard
				:
			-4 step	10000100
			-8 step	10001000
			-16step	10010000 Lightest setting
				ep is the sum of Machine parameter 2 (ADF only). However the steps cannot 5 or 16.

Switch	Initial Setting	Adjust		Usage/Comments
7	0	Black balance adjustment	Switch	76543210
6	0			
5	0	Copy/Black and white scan	64 steps	01000000 + Darkest setting
4	0	mode	00 -1	:
3	0	Resolution: 600x600dpi	32 steps	00100000
2	0	Document type: Text	16 steps	00001000
1	0		10 31003	:
0	0		8 step	00000100
			0 step	00000000 Lightest setting
				tep is the sum of Machine parameter 04 (ADF only). However the steps cannot

Switch	Initial Setting	Adjust		Usage/Comments
7	0	Black balance adjustment	Switch	76543210
6	0			
5	0	Copy/Black and white scan	64 steps	01000000 + Darkest setting
4	0	mode	00.44	:
3	0	Resolution: 600x600dpi	32 steps	00100000
2	0	Document type: Photo/Text Contrast: Dark, Darker, Light,	16 steps	00001000
1	0	Lighter	10 31003	:
0	0		8 step	00000100
			0 step	00000000 Lightest setting
				tep is the sum of Machine parameter 94 (ADF only). However the steps cannot

Switch	Initial Setting	Adjust		Usage/Comments
7	0	Black balance adjustment	Switch	76543210
6	0			
5	0	Copy/Black and white scan		
4	0	mode	64 steps	01000000 + Darkest setting
3	0	Resolution: 600x600dpi Document type: Photo/Text	32 steps	: 00100000
2	1	Contrast: Normal	32 Steps	•
1	0	Comman Horman	16 steps	00001000
0	1			:
			8 step	00000100
				:
			0 step	00000000 Lightest setting
				tep is the sum of Machine parameter 94 (ADF only). However the steps cannot

Switch	Initial Setting	Adjust		Usage/Comments
7	0	Black balance adjustment	Switch	76543210
6	0			
5	0	Copy/Black and white scan	64 steps	01000000 + Darkest setting
4	0	mode	00 -1	:
3	0	Resolution: 600x600dpi	32 steps	00100000
2	0	Document type: Photo	16 steps	00001000
1	0		10 Steps	:
0	0		8 step	00000100
			0 step	00000000 Lightest setting
				tep is the sum of Machine parameter 94 (ADF only). However the steps cannot

Switch	Initial Setting	Adjust		Usage/Comments
7	0	Black balance adjustment	Switch	76543210
6	0			
5	0	Copy mode	64 steps	01000000 + Darkest setting
4	0	Resolution: 600x300dpi	00 -1	:
3	0	Document type: Text	32 steps	00100000
2	0		16 steps	00001000
1	0		10 steps	:
0	0		8 step	00000100 :
			0 step	00000000 Lightest setting
				tep is the sum of Machine parameter 94 (ADF only). However the steps cannot

Switch	Initial Setting	Adjust		Usage/Comments
7	0	Black balance adjustment	Switch	76543210
6	0			
5	0	Copy mode	64 steps	01000000 + Darkest setting
4	0	Resolution: 600x300dpi		:
3	0	Document type: Photo/Text	32 steps	00100000
2	0	Contrast: Dark, Darker, Light, Lighter	16 steps	00001000
1	0	Ligitiei	10 steps	•
0	0		8 step	00000100
			1	: 00000000 Lightest setting tep is the sum of Machine parameter 04 (ADF only). However the steps cannot

Switch	Initial Setting	Adjust		Usage/Comments
7	0	Black balance adjustment	Switch	76543210
6	0			
5	0	Copy mode	64 steps	01000000 + Darkest setting
4	0	Resolution: 600x300dpi	00 -1	:
3	0	Document type: Photo/Text Contrast: Normal	32 steps	00100000
2	1	Contrast. Normal	16 steps	00001000
1	0		10 51005	:
0	1		8 step	00000100
			0 step	00000000 Lightest setting
				tep is the sum of Machine parameter 94 (ADF only). However the steps cannot

# **Machine Parameter 483**

Switch	Initial Setting	Adjust		Usage/Comments
7	0	Black balance adjustment	Switch	76543210
6	0			
5	0	Copy mode	64 steps	01000000 + Darkest setting
4	0	Resolution: 600x300dpi	00 -1	:
3	0	Document type: Photo	32 steps	00100000
2	0		16 steps	00001000
1	0		10 31003	:
0	0		8 step	00000100
			0 step	00000000 Lightest setting
				ep is the sum of Machine parameter 44 (ADF only). However the steps cannot

Switch	Initial Setting	Adjust		Usage/Comments
7	0	Black balance adjustment	Switch	76543210
6	0			
5	0	Black and White scan	64 steps	01000000 + Darkest setting
4	0	Resolution: 300x300 dpi,	00 11 1	:
3	0	200x200dpi Document type: Text	32 steps	00100000
2	0	Document type. Text	16 steps	00001000
1	0		10 steps	:
0	0		8 step	00000100
			0 step	00000000 Lightest setting
				tep is the sum of Machine parameter 94 (ADF only). However the steps cannot

Switch	Initial Setting	Adjust	Usage/Comments			
7	0	Black balance adjustment	Switch	76543210		
6	0					
5	0	Black and White scan	64 steps	01000000 + Darkest setting		
4	0	Resolution: 300x300 dpi,	00.44	:		
3	0	200x200dpi	32 steps	00100000		
2	0	Document type: Photo/Text Contrast: Dark, Darker, Light,	16 steps	00001000		
1	0	Lighter	10 3(0)3	:		
0	0	Lighter	8 step	00000100		
			0 step	00000000 Lightest setting		
			The total step is the sum of Machine parameter 485 and 494 (ADF only). However the steps cannexceed 64.			

Switch	Initial Setting	Adjust	Usage/Comments			
7	0	Black balance adjustment	Switch	76543210		
6	0					
5	0	Black and White scan	64 steps	01000000 + Darkest setting		
4	0	Resolution: 300x300 dpi,	00 -1	:		
3	0	200x200dpi	32 steps	00100000		
2	0	Document type: Photo/Text Contrast: Normal	16 steps	00001000		
1	0	Contrast. Normal	10 steps	•		
0	0		8 step	00000100		
			0 step	00000000 Lightest setting		
			The total step is the sum of Machine parameter 486 and 494 (ADF only). However the steps can exceed 64.			

Switch	Initial Setting	Adjust	Usage/Comments			
7	0	Black balance adjustment	Switch	76543210		
6	0					
5	0	Black and White scan	64 steps	01000000 + Darkest setting		
4	0	Resolution: 300x300 dpi,	00 41444	:		
3	0	200x200dpi	32 steps	00100000		
2	0	Document type: Photo	16 steps	00001000		
1	0		10 3(0)3	:		
0	0		8 step	00000100		
			0 step	00000000 Lightest setting		
			The total step is the sum of Machine parameter 487 and 494 (ADF only). However the steps can exceed 64.			

### **Machine Parameter 488**

Switch	Initial Setting	Adjust	Usage/Comments			
7	0	Black balance adjustment	Switch	76543210		
6	0					
5	0	Grayscale scan	64 steps	01000000 + Darkest setting		
4	0	Resolution: All		:		
3	0		32 steps	00100000		
2	0		16 steps	: 00001000		
1	0		10 steps			
0	0		8 step	00000100		
			0 step	00000000 Lightest setting		
			The total step is the sum of Machine parameter 488 and 495 (ADF only). However the steps can exceed 64.			

Switch	Initial Setting	Adjust	Usage/Comments			
7	0	Black balance adjustment	Switch	76543210		
6	0					
5	0	Fax mode	64 steps	01000000 + Darkest setting		
4	0	Document type: Gray scale		:		
3	0	Contrast: Dark, Darker, Light,	32 steps	00100000		
2	0	Lighter	16 steps	00001000		
1	0		10 steps	•		
0	0		8 step	00000100		
			0 step	: 00000000 Lightest setting		
				tep is the sum of Machine parameter 94 (ADF only). However the steps cannot		

Switch	Initial Setting	Adjust	Usage/Comments			
7	0	Black balance adjustment	Switch	76543210		
6	0					
5	0	Fax mode	64 steps	01000000 + Darkest setting		
4	0	Document type: Gray scale		:		
3	0	Contrast: Normal	32 steps	00100000		
2	0		16 steps	00001000		
1	0		10 steps	•		
0	0		8 step	00000100		
			0 step	00000000 Lightest setting		
			The total step is the sum of Machine parameter 490 and 494 (ADF only). However the steps can exceed 64.			

# Machine Parameter 491 — Factory use only

Switch	Initial Setting	Adjust	Usage/Comments		
7	1	White balance adjustment		eter changes the white balance for ADF	
6	0			r all modes.	
5	0	For ADF scan (common)		the settings for Copy/Scan/Fax mode	
4	0	Copy/Scan/Fax modes	to 475.	/, refer to Machine parameters from 460	
3	0		10 47 3.		
2	0		Switch	76543210	
1	1				
0	0		16 steps	00010000 + Darkest setting	
			8 steps	: 00001000	
			4 steps	00000100	
			0 step	00000000 ← Standard	
			-4 step	10000100	
			-8 step	10001000	
			-16step	10010000 Lightest setting	
			The total step is the sum of each respective Machine parameter, 493(copy mode only) and 492. However the steps cannot exceed –16 or 16.		

Switch	Initial Setting	Adjust		Usage/Comments	
7	0	White balance adjustment	This param	eter changes the white balance for all	
6	0			s, and black and white 600dpi scan	
5	0	For Copy modes and	mode.		
4	0	Black and White 600dpi scan		the settings for Copy/Scan/Fax mode	
3	0	mode	to 475.	y, refer to Machine parameters from 460	
2	1		10 473.		
1	0		Switch	76543210	
0	0				
			16 steps	00010000 + Darkest setting	
				:	
			8 steps	00001000	
			4 steps	00000100	
			Clops	:	
			0 step	00000000 ← Standard	
				:	
			-4 step	10000100	
			0 oton	: 10001000	
			-8 step		
			-16step	10010000 Lightest setting	
				5 111 00 tm. g	
			The total step is the sum of each respective		
				arameter, 493 and 492 (ADF only).	
			However th	e steps cannot exceed -16 or 16.	

Switch	Initial Setting	Adjust		Usage/Comments			
7	0	Factory use only					
6	0	Factory use only					
5	0	Black balance adjustment			es the black balance for ADF		
4	0				s except grayscale scan.		
3	0	For ADF scan			s for Copy/Scan/Fax mode		
2	0	Copy/Scan/Fax modes	respectively to 489.	y, reter to iv	Machine parameters from 476		
1	0	(For grayscale scan, refer machine parameter 495)	10 469.				
0	0	machine parameter 493)	Switch	543210			
			63 steps	111111	+ Darkest setting		
				:	Ü		
			32 steps	100000			
				:			
			16 steps	001000			
			8 step	000100			
			o step	•			
			0 step	000000	Lightest setting		
			The total step is the sum of each respective Machine parameter and 494. However the steps cannot exceed 63.				

Switch	Initial Setting	Adjust	Usage/Comments			
7	0	Factory use only				
6	0	Factory use only				
5	0	Black balance adjustment	This param	eter change	es the black balance for ADF	
4	0		scanning in			
3	0	For ADF scan in grayscale			s for FBS scan, refer to	
2	0		Machine pa	irameter 48	88.	
1	0		Switch	543210		
0	0		63 steps	111111	+ Darkest setting	
				:	, Barnost souring	
			32 steps	100000		
				:		
			16 steps	001000		
				:		
			8 step	000100		
			0 step	000000	Lightest setting	
			o step	000000	Lightest setting	
			The total step is the sum Machine parameter 488			
			and 495. However the steps cannot exceed 63.			

#### About the white balance and black balance adjustment

(Machine parameters 460 to 495)

White balance adjustment for FBS : A+B (-16 steps  $\leq$  A+B  $\leq$  16 steps) White balance adjustment for ADF : A+B+C (-16 steps  $\leq$  A+B+C  $\leq$  16 steps)

Mode Resolution		Document	Contrast	Machine pa	arameter for wh	nite balance
Iviode	riesolution	type	Contrast	Α	В	С
		Text	_	460		
Copy/Scan	600x600	Photo/Text	Other than Normal	461	1	
Copy/Scari	000000	FIIOIO/TEXI	Normal	462	]	
		Photo		463	493	
		Text		464	] 493	492
Conv	600x300	Photo/Text	Other than Normal	465	]	
Сору	600X300	FIIOIO/TEXI	Normal	466		
		Photo		467		
	300x300	Text	1	468	1\ /1	(ADF only)
		00x300 Photo/Text	Other than Normal	469		(ADI OIIIY)
Scan	200x200	FIIOIO/TEXI	Normal	470		
Scari		Photo		471		
		Color	1	472	] X	
	_	Grayscale	1	473		
		Normal/ Fine/	_	474	] / \	
Fax	_	Super fine		7/4	]/ \	
		Grayscale	_	475	/	

Black level adjustment for FBS : A  $(0 \text{ step} \le A \le 64 \text{ steps})$ Black level adjustment for ADF : A+B  $(0 \text{ step} \le A + B \le 64 \text{ steps})$ 

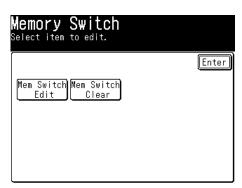
Mode	Resolution	Document	Contrast	Machine paramete	er for black balance
Mode	nesolution	type	Contrast	Α	В
		Text	_	476	
Copy/Scan	600x600	Photo/Text	Other than Normal	477	
Copy/Scan	6000000	PHOIO/TEXT	Normal	478	
		Photo	_	479	
		Text	_	480	
Conv	6007300	Photo/Text	Other than Normal	481	
Сору	600x300	Prioto/Text	Normal	482	494
		Photo	_	483	(ADF only)
	300x300 200x200	Text	_	484	
		I Photo/I avt	Other than Normal	485	
Coon			Normal	486	
Scan		Photo	_	487	
		Color	_		
	_	Grayscale	_	488	495 (ADF only)
F		Normal/ Fine/ Super fine	_		494
Fax	_	Crovocolo	Other than Normal	489	(ADF only)
		Grayscale	Normal	490	

# 3.3 Memory Switch Adjustment

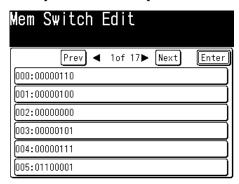
#### 3.3.1 Setting the Memory Switches

These switches are used to program internal machine parameters. The primary back up battery maintains these settings if power are lost.

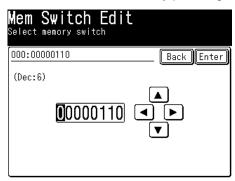
1. From standby, press <Setting>, <\*>, <0>, <1>.



2. Press [Mem Switch Edit].



- 3. Call up the desired switch by pressing [▼] or [▲], or by pressing the numeric keypad.
- 4. Select the desired switch by pressing the box.



- 5. To navigate through the memory switch settings:
  - The bits are ranged from 7 (left) to 0 (right).
  - Press[ ◀]or[ ►]of the cursor key to move the cursor.
  - Press <0> or <1> on the numeric keypad, or [▼] or [▲], to change the bit value.
  - Press <Enter> to save the setting of the displayed memory switch and return to the memory switch edit screen.
  - Press <Reset> not to save the setting of the displayed memory switch.
- 6. If you want to set other memory switches, repeat step 3-5. Otherwise, proceed to step 7.
- 7. Press <Reset> to return the machine to standby.

**Note:** You can confirm the initial setting of each Memory Switch by the Memory Switches List.

The memory switch List will be printed by pressing <Setting>, <\*>, <1>, <0>.

#### 3.3.2 Clearing the Memory Switches

Resets the memory switches to factory defaults.

- 1. From standby, press <Setting>, <\*>, <0>, <1>.
- 2. Press [Mem Switch Clear].



3. Press [Yes]. The memory switches will reset to factory defaults.

Note: To finish the operation without clearing the switches, press [No].

4. Press <Reset> to return the machine to standby.

#### About the "O" symbol at the list

The "O" at the list indicates that you can set the switch respectively for the second phone line. See "3.25 Multi Line Settings" on page 3-141 for the setting.

# ${\bf Memory\ Switch\ 000-Dialer}$

•	Switch	Initial Setting	Adjust	Usage/Comments
	7	0	Factory use only	
	6	0	Factory use only	
0	5	0	CED detection condition	Sets whether the detection should be strict or not.
	4	0		Normal ← →Strict 350ms 500ms 700ms 1000ms Switch 5 0 0 1 1 4 0 1 0 1
0	3	0	DIS detect time after dialing 0: 55 sec 1: 70 sec	Sets the time DIS signal is detected after dialing a number.
0	2	1	CED detection 0: No 1: Yes	Can be use to ignore CED detection if noise on the telephone line is mistaken as a 2100 Hz CED signal.
0	1	1	Dial tone detection 0: Do not dial 1: Dial	Determines if the machine proceeds with dialing or indicates an error if no dial tone is detected within five seconds of going off-hook.
0	0	0	Phone line type for the first phone line 0: PSTN 1: PBX	When set to PSTN, the machine checks for dial tone and acts according to the setting of memory switch 000, bit 1. When set to PBX, the machine always dials a given number of seconds after going off-hook. Memory switch 001 sets the number of seconds.

# Memory Switch 001 — Dialer

	Wicinion y	•		
	Switch	Initial Setting	Adjust	Usage/Comments
	7	0	Factory use only	
	6	0	Factory use only	
0	5	0	DIS detection condition	Sets whether the detection should be strict or not.
	4	0		
				Normal ← →Strict
				200ms 300ms 400ms 500ms
				Switch 5 0 0 1 1 1 4 0 1 0 1
				4 0 1 0 1
~	3	1	PBX mode dial pause	Sets the number of seconds the machine waits
0	2	0	. Extinodo diai padeo	before dialing when memory switch 000, bit 0 is set
	1	0		to PBX mode.
	0	1		
		·		Switch 3 2 1 0 Pause time
				0 0 0 0 0 sec
				0 0 0 1 1 sec
				0010 2 sec
				0 0 1 1 3 sec
				0 1 0 0 4 sec 0 1 0 1 5 sec
				0101 5 sec 0110 6 sec
				0111 7 sec
				1000 8 sec
				1001 9 sec Initial setting
				1 0 1 0 10 sec
				1 0 1 1 11 sec
				1 1 0 0 12 sec
				1 1 0 1 13 sec
				1 1 1 0 14 sec
				1 1 1 1 15 sec

# Memory Switch 002 — Dialer

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Factory use only	
6	0	Factory use only	
5	0	Factory use only	
4	0	Factory use only	
3	0	Factory use only	
2	0	Factory use only	
1	0	Factory use only	
0	1	Redial when D.0.7 error occurred 0 : Yes 1 : No	When this switch is set to "1", the machine does not auto-redial to the remote machine when the remote unit did not answer the call within the incoming detection time (D.0.7 error).

# Memory Switch 003 — Factory use only

# Memory Switch 004 — Dialer

	Switch	Initial Setting	Adjust	Usage/Comments
	7	0	Factory use only	
	6	0	Factory use only	
	5	0	Factory use only	
	4	0	Factory use only	
_	3	1	DTMF attenuation	See table below
0	2	0		Note: The setting of this switch is available only
	1	0		when setting other than 0.
	0	0		

#### Memory Switch 004...DTMF attenuation

Switch	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	-0
	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB
3	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
2	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0
1	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0
0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0

# Memory Switch 005 — Dialer

- 1				
	Switch	Initial Setting	Adjust	Usage/Comments
	7	0	Factory use only	
	6	1	Ring signal detect time	Set the time that an incoming ring will not be detected
0	5	1		after hanging up. (Fax/Tel Ready mode only.)
	4	0		Switch 6 5 4
		_		0 0 0 100 ms
				0 0 1 200 ms
				0 1 0 300 ms
				0 1 1 400 ms
				1 0 0 500 ms
				1 0 1 600 ms
				1 1 0 700 ms
				1 1 1 800 ms
0	3	0	Number of CI signal detection	Select the number of detection time of CI signal in
			in Fax/Tel Ready mode	the Fax/Tel Ready mode or in the ringer silent mode.
			_	Incoming calls are answered according to this setting
			0: Detect 1 time	regardless of the number of rings chosen in the User
			1: Detect 2 times	Settings.
o	2	0	Dual ring detection	When enabled, the machine is able to auto answer
			0: No	an incoming ring with an off time of 120 - 60 ms.
			1: Yes	
o	1	0	Long ring detection	Allows the machine to respond to an incoming ring
			0: No	if the ring on time is longer than two seconds.
			1: Yes	
o	0	1	Frequency of the CI signal	When disabled, the unit will not check the frequency of
			detection	the incoming CI signal.
			0: No	
			1: Yes	

Memory Switch 006 ~ 009 — Factory use only

# **Memory Switch 010 — Transmission**

	Switch	Initial Setting		Ad	just							Usa	ge/Co	mmer	nts		
0	7	1	Busy ton 0: No 1: Yes	e dete	ectic	n			Set the mistak					-	ne of r	emote	unit is
0	6	0	Fallback Set at 0: Set at 1:	240 2 time	0 es	480 2 tin	nes		nes 2	600 times	2	2000 times times		nes			
0	5	0	Overseas 0: No 1: Yes	s mod	le				the CE	ED sig and t	nal rans	(2100 mits t	Hz). he D0	Also i	at is di gnores nal in i	the fi	rst DIS
0	4	0	V.29 Ech 0: No 1: Yes	io Pro	tect	tone	е		suppre transn receiv protec secon	ession nitted er not t the r d Ech g usin	wil info to r ece o Pi	i cut the cut	ne be on whi e the mage tone	ginnin ich ma trainin from ( is plac	ipped of portion of the portion of t	on of t se the data. <sup>-</sup> ling, a or to th	he To 0.5 ne
O	3	1	Maximun 2.4 4.8							21.6	24	26.4	28 B	21.2	33 6		
	2	0	0 0	0	0	0	0	0	0	1	1	1	1	1	1		
	0	1	0 0 0 0 0 1	0 1 0	0 1 1	1 0 0	1 0 1	1 1 0	1 1 1	0 0 0	0 0 1	0 1 0	0 1 1	1 0 0	1 0 1		

# **Memory Switch 011 — Transmission**

	Switch	Initial Setting	Adjust Usage/Comments
	7	0	The time between reception of CFR and transmission of data
			When CFR and data overlap due to line echo, increase the interval between CFR and data transmission using this switch.
	6	1	
			250 ms 500 ms 750 ms 1000 ms
			Switch 7 0 0 1 1
			Switch 6 0 1 0 1
	5	0	Interval between DCS and TCF
0			
			When FTT is received after DCS and TCF signals due to line echo, increase the
			interval between DCS and TCF signals using this switch.
	4	0	
			75 ms 300 ms 450 ms 600 ms
			Switch 5 0 0 1 1
			Switch 4 0 1 0 1
	3	1	
0	2	0	Output attenuation See table below
	1	0	
	0	1	

# Memory Switch 011...Output attenuation

	•																
ĺ	Switch	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	-0
		dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB
	3	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
ĺ	2	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0
	1	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0
ĺ	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0

# **Memory Switch 012 — Transmission**

	Switch	Initial Setting	Adjust	Usage/Comments
	7	0	Factory use only	
	6	0	Factory use only	
0	5	0	Changing the date format of the transmitted TTI 0: No 1: Yes	When set to "1", the machine changes the date format of the transmitted TTI from MM:DD:YY, or vice versa.
0	4	1	TTI transmit 0: No 1: Yes  (Note: Turning TTI transmission off may violate local or federal regulations.)	When set at "0", transmission of the TTI is disabled. The TTI includes the followings:  • Sender name  • Sender's fax number  • Data & time, and number of pages To set the individually transmission of them, see Memory SW 016.
0	3	0	ECM response time 0: 3 sec 1: 4.8 sec	The time limit to receive the response signal for the ECM post message.
0	2	0	ECM error retransmit time 0: 200 ms 1: 400 ms	The time limit before the ECM error is retransmitted.
0	1	0	Interval between DIS and DCS	
	0	0	0 ms 500 ms 1000 Switch 1 0 0 1 Switch 0 0 1 0	ms 1500 ms 1 1

# **Memory Switch 013 — Transmission**

	Switch	Initial Setting	Adjust	Usage/Comments
0	7	0	ANSam detection 0: Yes 1: No	During the V8 handshake, if some noise disturbs the handshake and an error occurs, set to "1".
0	6	0	V.34 transmission 0: Yes 1: No	Individual setting for V.34 transmission.
0	5	0	CSI/TSI/CIG transmit 0: Yes 1: No	When set at "1", transmission of the CSI, TSI and CIG signals are disabled.
0	4	0	ECM mode 0: On 1: Off	Determines ECM mode. ECM mode reduces document memory and may lengthen transmission and reception times.
0	3	0	Retransmit automatically when receiving RTN/PIN signals 0: Yes 1: No	When set to "1", retransmission disables automatically if receiving RTN/PIN signals.
	2	1	Factory use only	
	1	0	Factory use only	
	0	0	Factory use only	

### Memory Switch 014 — Factory use only

# **Memory Switch 015 — Transmission**

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Program individual autodialer attributes 0: No 1: Yes	Allows individual setting of memory switches 010 as attribute 1, 011 as attribute 2, 012 as attribute 3 and 013 as attribute 4 when fax or e-mail destinatilns are registered in the address book. (Refer to page 3-73 for settings.)
6	0	Factory use only	
5	0	Factory use only	
4	0	Factory use only	
3	0	Factory use only	
2	0	Sending RTC signal when transmission is canceled 0: Yes 1: No	RTC signal is sent at the end of the transmission. When set at "0", the machine will send the RTC if the transmission is canceled. No error will occur. When set at "1", an error will occur because RTC will not be sent at the end of a canceled transmission.
1	1	Cancel redial if T.4.1 or T.4.4 error occurs 0: Yes 1: No	When set at "0", if a T.4.1 or T.4.4 error occurs, the machine will not retry the transmission.
0	1	Action after EOR signal 0: Continue 1: Discontinue	Sets action after receiving PPR four times at 2400 bps.

# **Memory Switch 016 — Transmission**

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Factory use only	
6	0	Factory use only	
5	0	Factory use only	
4	0	Factory use only	
3	1	Additional data on TTI transmit 0: No 1: Yes	When set at "0", the transmission of the additional data (time, the number of pages, file number, etc) is disabled.  Note: This switch is available only when Memory switch 012, bit 4 and/or Memory switch 013, bit 5 is available.
2	1	Subscriber ID transmit 0: No 1: Yes	When set at "0", the transmission of the subscriber ID is disabled.  Note: This switch is available only when Memory switch 012, bit 4 and/or Memory switch 013, bit 5 is available.
1	1	TTI (name) transmit 0: No 1: Yes	When set at "0", the transmission of the name that is stored in the unit is disabled.  Note: This switch is available only when Memory switch 012, bit 4 and/or Memory switch 013, bit 5 is available.
0	0	Factory use only	

# Memory Switch 017 ~ 019 — Factory use only

### Memory Switch 020 — Reception

	Switch	Initial Setting	Adjust							Usage/Comments								
	7	0	Data 0: 1 1: 2		or ra	ıte					mines al line						rred lii	nes out
0	6	0	Pause one second after sending CED 0: No (75 ms) 1: Yes (1 sec)						A 2100 Hz CED signal disables echo suppression in some telephone equipment. When set to "1", the machine pauses one second after sending CED, which allows echo suppression to restart. This may help with problematic overseas reception.							'1", the CED,		
	5	0	Fac	tory	use	only												
	4	0	Fac	tory	use	only												
0	3	1	Rec	eive	spe	ed (ł	ops	s)										
	2	1														r phon	e lines	
	1	0	2.4							19.2	21.6	24	26.4	28.8	31.2	33.6		
	0	1	0	0	0		1	1	0	0	0	0	1	1	1	1		
			0	0 1	0	1 1	0	0 1	0	1	0 0	1	0	1	0	1		

# **Memory Switch 021 — Reception**

	Switch	Initial Setting	Adjust	Usage/Comments					
	7	0	Not used						
	6	0	DIS inch declaration						
			0 : Yes						
	_		1 : No	The San Still Provide the second and the of the second and					
	5	0	Paper size limitation  0: No limit	This will limit the paper length of the received document. Setting this bit to "1", the paper will be					
			1: 3m	cut when the length reached to 3m.					
o	4	0	T1 timer	Adjusts the T1 time-out. After the machine dials					
_			0: 35 sec	the remote machine's phone number, it begins					
			1: 20 sec	sending CNG and waits this amount of time before disconnecting the line.					
	3	1	Print image data when post	If the received document includes the RTC, the					
			message is not received after	machine prints the data even though the following					
			receiving RTC signal 0: No	protocol is not succeeded.					
			1: Yes						
o	2	0	DIS/DTC Extend field	Setting this switch to "1" will disable ITU-T superfine					
			Transmit	mode.					
			0: Yes 1: No (Tx until Bit No.24 of						
			DIS/DTC)						
_	1	0	G3 echo receive						
0	0	1							
			Adjusts the delay between detection of training/TCF and sending of CFR.						
			100 ms 500 ms 800 ms 1200 ms						
			Switch 1 0 0 1 1						
			Switch 0 0 1 0	1					

# Memory Switch 022 — Factory use only

# **Memory Switch 023 — Reception**

	Switch	Initial Setting	Adjust	Usage/Comments
	7	0	Factory use only	
•	6	0	V.34 reception 0: Yes 1: No	Individual setting for V.34 reception.
	5	0	Factory use only	
	4	0	Factory use only	
	3	0	Factory use only	
	2	0	Number of seconds for	Sets the time for bell ringing after the machine has
	1	0	pseudo-ringing	answered the call in fax/tel reception mode.
	0	0		Switch 2 1 0  1 1 1 300 seconds 1 1 0 180 seconds 1 0 1 120 seconds 1 0 0 90 seconds 0 1 1 60 seconds 0 1 0 50 seconds 0 0 1 40 seconds 0 0 0 30 seconds Initial setting

# Memory Switch 024 ~ 029 — Factory use only

#### Memory Switch 030 — Modem

	Wicinion y		i 030 — Modelli	,						
	Switch	Initial Setting	Adjust	Usage/Comments						
$\circ$	7	0	Number of HDLC end flags	Defines the number of HDLC end flags.						
0	6	0	_	_						
	5	1		Switch 7 6 5 4						
	4	0		0000 1						
				0001 2						
				0010 3 Initial setting						
				0011 4						
				0100 5						
				0101 6						
				0110 7						
				0111 8						
				1000 9						
				1001 10						
				1010 11						
				1011 12						
				1 1 0 0 13						
				1 1 0 1 14						
				1110 15						
				1 1 1 1 16						
	3	0	Factory use only							
	2	0	Factory use only							
0	1	0	Digital cable equalizer	When set to "1", become efficient for the line short						
			0: Free	break, but become weak for the line noise. It'						
			1: Hold	s available only for communication at 14,400 or 12,000 bit/s.						
	0	0	No use							

## Memory Switch 031 — Modem

	Switch	Initial Setting	Adjust	Usage/Comments
$\circ$	7	1	EYE-Q check level at	0 0 1 1
	6	0	7200 bps	Strict Lenient
				0 1 0 1
O	5	1	EYE-Q check level at	0 0 1 1
	4	0	9600 bps	Strict Lenient
				0 1 0 1
O	3	1	EYE-Q check level at	0 0 1 1
	2	0	12000 bps	Strict Lenient
				0 1 0 1
O	1	1	EYE-Q check level at	0 0 1 1
	0	0	14400 bps	Strict Lenient
				0 1 0 1

## Memory Switch 032 — Modem

	Switch	Initial Setting	Adjust	Usage/Comments
0	7	0	EYE-Q slice level 0: Disable 1: Enable	Setting this bit to "1" enables memory switch 032, bits 0-3 and memory switch 031, bits 0-7 and enables EYE-Q check adjustment.
0	6	1	Check EYE-Q 0: No 1: Yes	Set at 0: Line condition status (EYE-Q) is not checked after checking TCF. Set at 1: Line condition status (EYE-Q) is checked after checking TCF.
	5	0	Factory use only	
	4	0	Factory use only	
$\circ$	3	1	EYE-Q check level at	0 0 1 1
	2	0	2400 bps	Strict Lenient 0 1 0 1
$\circ$	1	1	EYE-Q check level at	0 0 1 1
	0	0	4800 bps	Strict Lenient 0 1 0 1

#### Memory Switch 033 — Modem

	Switch	Initial Setting	Adjust	Usage/Comments
	7	0	Factory use only	
	6	0	Factory use only	
	5	0	Factory use only	
	4	0	Factory use only	
	3	0	Factory use only	
	2	0	Factory use only	
0	1	0	Delete receive echo of CFR at the receiver side 0: No 1: Yes	Modem will be opened only in high-speed mode. Sets this switch to "1" to resolve the problem caused of the echo of CFR.
0	0	0	Expand FSK receive time after detecting flag 0: 3.3 seconds 1: 10 seconds	Setting this switch to "1" extend HDLC frame receive timer in FSK from 3.3 seconds to 10 seconds after detecting pre-amble.

Memory Switch 034 ~ 039 — Factory use only

## **Memory Switch 040 — Scanner**

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Factory use only	
6	0	Factory use only	
5	0	Factory use only	
4	0	Factory use only	
3	0	Factory use only	
2	1	Factory use only	
1	0	Factory use only	
0	1	Document TX length limit	Setting to unlimited will override document jam
		0: 3.6 meters	sensing.
		1: 1 meter	

## Memory Switch 041 ~ 059 — Factory use only

# Memory Switch 060 — Remote reception

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Factory use only	
6	1	CML relay off time after dialing 0: 1 sec 1: 200 ms	When dialing from the keypad, phone line noise may occur as the CML relay switches on and off. Set this switch to "0" to avoid this.
5	0	DTMF tones heard through handset 0: No 1: Yes	Determines if DTMF tones are produced through the handset in off-hook dialing.
4	0	Factory use only	
3	0	Factory use only	
2	0	Factory use only	
1	0	Factory use only	
0	0	Factory use only	

## Memory Switch 061 — Remote reception

,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	CWILCI	i do i i i i i i i i i i i i i i i i i i	•
Switch	Initial Setting	Adjust	Usage/Comments
7	0	Factory use only	
6	0	Factory use only	
5	1	Factory use only	
4	1	Factory use only	
3	0	Off-hook / on-hook detect	Sets the time interval between the on-hook and off-
2	1	time	hook (or off-hook/on-hook) condition.
1	0		Switch 3 2 1 0 Time
0	0		0 0 0 0 0 ms
			0 0 0 1 100 ms
			0 0 1 0 200 ms
			0 0 1 1 300 ms
			<u>0 1 0 0 400 ms Initial setting</u>
			0 1 0 1 500 ms
			0 1 1 0 600 ms
			0 1 1 1 700 ms
			1 0 0 0 800 ms
			1 0 0 1 900 ms
			1 0 1 0 1000 ms
			1 0 1 1 1100 ms
			1 1 0 0 1200 ms
			1 1 0 1 1300 ms
			1 1 1 0 1400 ms
			1 1 1 1 1500 ms

## Memory Switch 062 — Remote reception

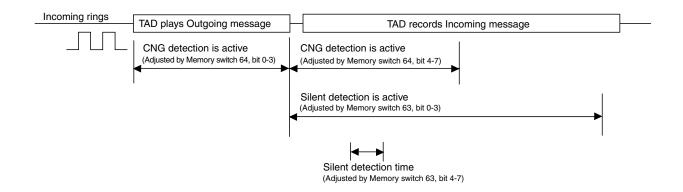
	A	<b>.</b>	
Switch	Initial Setting	Adjust	Usage/Comments
7	0	Factory use only	
6	0	Factory use only	
5	0	Factory use only	
4	1	CNG detect in Ans/Fax ready 0: No 1: Yes	When set to "1", the machine detects the CNG signal in Ans/Fax ready.
3	0	Switch-hook time	If the switch hook is quickly depressed and
2	0		released, switch-to-fax will occur. This setting
1	1		adjusts how quickly the switch hook activation must
0	1		be.  Switch 3 2 1 0 Time  0 0 0 0 0 ms  0 0 0 1 100 ms  0 0 1 0 200 ms  0 0 1 1 300 ms Initial setting  0 1 0 0 400 ms  0 1 0 1 500 ms  0 1 1 0 600 ms  0 1 1 1 700 ms  1 0 0 0 800 ms  1 0 1 0 1000 ms  1 0 1 1 1100 ms  1 1 1 0 1200 ms  1 1 1 1 1300 ms  1 1 1 1 1500 ms

## Memory Switch 063 — Remote reception and TAD interface

- Wichion y		Temote reception	
Switch	Initial Setting	Adjust	Usage/Comments
7	0	Adjust silent detection time	This switch adjusts the length of silence required for silent detection activation.  Switch 7 6 5 4 Time  0 0 0 0 0 sec  0 0 0 1 1 sec
6	1		0 0 1 0 2 sec 0 0 1 1 3 sec 0 1 0 0 4 sec 0 1 0 1 5 sec Initial setting 0 1 1 0 6 sec
5	0		0111 7 sec 1000 8 sec 1001 9 sec 1010 10 sec 1011 11 sec
4	1		1 1 0 0 12 sec 1 1 0 1 13 sec 1 1 1 0 14 sec 1 1 1 1 15 sec
3	0	Number of seconds silent detection remains active	This switch adjusts the length of time silence detection remains active.  Switch 3 2 1 0 Time 0 0 0 0 0 sec 0 0 0 1 10 sec
2	1		0 0 1 0 20 sec 0 0 1 1 30 sec 0 1 0 0 40 sec 0 1 0 1 50 sec 0 1 1 0 60 sec Initial setting
1	1		0 1 1 1 70 sec 1 0 0 0 80 sec 1 0 0 1 90 sec 1 0 1 0 100 sec 1 0 1 1 110 sec
0	0		1 1 0 0 120 sec 1 1 0 1 130 sec 1 1 1 0 140 sec 1 1 1 1 150 sec

#### Memory Switch 064 — Remote reception and TAD interface

Switch	Initial	Adjust	Lleage/Comments
	Setting	<u> </u>	Usage/Comments
7	0	CNG detect period after TAD begins recording ICM	Sets the period during which CNG is detected after the TAD begins recording incoming message.  Switch 7 6 5 4 Time  0 0 0 0 0 sec  0 0 0 1 10 sec
6	0		0 0 1 0 20 sec 0 0 1 1 30 sec Initial setting 0 1 0 0 40 sec 0 1 0 1 50 sec 0 1 1 0 60 sec
5	1		0 1 1 1 70 sec 1 0 0 0 80 sec 1 0 0 1 90 sec 1 0 1 0 100 sec 1 0 1 1 110 sec
4	1		1 1 0 0 120 sec 1 1 0 1 130 sec 1 1 1 0 140 sec 1 1 1 1 150 sec
3	0	CNG detect period after TAD answers	Sets the period during which CNG is detected after the TAD answers an incoming call.  Switch 3 2 1 0 Time  0 0 0 0 0 sec  0 0 0 1 10 sec Initial setting
2	0		0 0 1 0 20 sec 0 0 1 1 30 sec 0 1 0 0 40 sec 0 1 0 1 50 sec 0 1 1 0 60 sec
1	0		0 1 1 1 70 sec 1 0 0 0 80 sec 1 0 0 1 90 sec 1 0 1 0 100 sec 1 0 1 1 110 sec
0	1		1 1 0 0 120 sec 1 1 0 1 130 sec 1 1 1 0 140 sec 1 1 1 1 150 sec



## Memory Switch 065 — Remote reception

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Adjustment of CI detect time	Sets the time added to or reduced from the CI
6	0	•	detect time.
5	0		
4	0		Switch 7 6 5 4 3 Time
3	0		1 1 1 1 1 1 150 msec
	Ū		1 1 1 0 1 140 msec
			: :
			0 1 0 0 1 40 msec
			0 0 1 1 1 30 msec
			0 0 1 0 1 20 msec
			0 0 0 1 1 10 msec
			00000 0 msec Initial setting
			0 0 0 1 0 -10 msec
			0 0 1 0 0 -20 msec
			0 0 1 1 0 -30 msec
			0 1 0 0 0 -40 msec
			: :
			1 1 1 0 0 -140 msec
			1 1 1 1 0 -150 msec
2	0	Factory use only	
1	0	Factory use only	
0	0	Beep if fax handset hang up	Determines if your machine beeps when having left
		0: Yes	the fax's handset hanging up after communication.
		1: No	

Memory Switch 066 ~ 069 — Factory use only

## **Memory Switch 070 — Operation**

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Display error line 0: No 1: Yes	The number of error lines contained in the received data will be shown in the LCD.
6	0	Tonal line monitor 0: No 1: Yes	Allows fax communication to be heard through the monitor speaker.
5	0	Factory use only	
4	0	Sort autodialer printout 0: Sort by autodialer location 1: Sort by location ID	Specifies how entries on autodialer printouts are sorted.
3	1	Print check message if power is lost 0: No 1: Yes	In the event of two power losses in a 40-hour period, documents will be lost. When power is restored, a check message will print.
2	1	Print page if error occurs during memory transmission 0: No 1: Yes	For easy identification, the first page of a document stored for memory transmission will print along a check message if an error occurs during memory transmission.
1	1	Print check message 0: No 1: Yes	To notify the user of an error, a check message can be printed if a communication error occurs.
0	0	Factory use only	

## **Memory Switch 071 — Operation**

	Initial		1
Switch	Setting	Adjust	Usage/Comments
7	0	Factory use only	
6	0	Factory use only	
5	1	Print TCR with the original page during memory transmission when the result is NG 0: No 1: Yes	For easy identification, the first page of a document stored for memory transmission will print along a TCR when the transmission result is NG.
4	0	Factory use only	
3	1	Print TCR with the original page during memory transmission when the result is OK 0: No 1: Yes	For easy identification, the first page of a document stored for memory transmission will print along a TCR when the transmission result is OK.
2	0	Factory use only	
1	0	Factory use only	
0	0	Display modem speed 0: No 1: Yes	The transmit/receive speed is displayed in the LCD.

## Memory switch071 ... Print TCR with the original page

Switch 3	(	)		1
Switch 5	0	1	0	1
When Memory transmission was OK,	No	No	Yes	Yes
When Memory transmission was NG,	No	Yes	No	Yes
When all broadcast transmissions were OK,	No	No	Yes	Yes
When some broadcast transmissions were NG,	No	Yes	No	Yes

## **Memory Switch 072 — Operation**

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Factory use only	
6	0	Factory use only	
5	0	Factory use only	
4	0	Factory use only	
3	0	Factory use only	
2	0	Factory use only	
1	1	Erase polled document 0: No 1: Yes	Determines if a document stored for polling is erased after being polled.
0	1	Print TCR after the batch transmission 0: No 1: Yes	Determines if printing the confirmation report after completing the batch transmission.

## Memory Switch 073 ~ 096 — Factory use only

## Memory Switch 097 — Other functions

	0 111101		
Switch	Initial Setting	Adjust	Usage/Comments
7	0	Day light saving time	This switch sets the month when the day light sav-
6	0	(Summer time) start month	ing time (summer time) begins.
5	1		Switch 7 6 5 4 Time
4	1		0 0 0 0 March
			0 0 0 1 January
			0 0 1 0 February
			0 0 1 1 March Initial setting
			0 1 0 0 April
			0 1 0 1 May
			0 1 1 0 June
			0 1 1 1 July
			1 0 0 0 August
			1 0 0 1 September
			1 0 1 0 October
			1011 November
			1 0 1 1 December
3	0	Day light saving time (Summer time) start week	This switch sets on which week when the day light saving time (summer time) begins.
2	0		Start day light saving from Sunday 1:00
1	1		
0	0		Switch 3 2 1 0 Time
			0 0 0 0 of the last week
			0 0 0 1 of the first week
			0 0 1 0 of the second week (USA initial)
			0 0 1 1 of the third week
			0 1 0 0 of the fourth week
			0 1 0 1 of the last week of the month
			(European initial)

## Memory Switch 098 — Other functions

Switch	Initial Setting	Adjust	Usage/Comments
7	1	Day light saving time	This switch sets the month when the day light sav-
6	0	(Summer time) end month	ing time (summer time) ends.
5	1		Switch 7 6 5 4 Time
4	1		0 0 0 0 October
			0 0 0 1 January
			0 0 1 0 February
			0 0 1 1 March
			0 1 0 0 April
			0 1 0 1 May
			0 1 1 0 June
			0 1 1 1 July
			1 0 0 0 August
			1 0 0 1 September
			1010 October (European initial)
			1011 November (USA initial)
			1011 December
3	0	Day light saving time (Summer time) end week	This switch sets the week when the day light saving time (summer time) ends.
2	0		End day light saving from Sunday 1:00
1	0		Switch 3 2 1 0 Time
0	1		0 0 0 0 of the last week
			0 0 0 1 of the first week (USA initial)
			0 0 1 0 of the second week
			0 0 1 1 of the third week
			0 1 0 0 of the fourth week
			0 1 0 1 of the last week (European Initial)

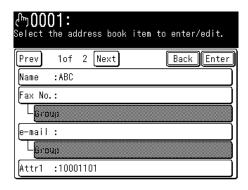
Memory Switch 099 — Factory use only

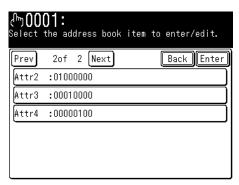
## 3.4 Setting Individual Autodialer Attributes

This function allows the user to configure an individual address book entry with the settings shown in Memory Switches 010, 011, 012 and 013.

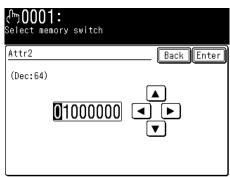
#### To set the individual attributes:

- 1. Change memory switch 15, bit 7 to "1". (See setting 3.3.1 Setting the Memory Switches for more information on changing memory switch 015.)
- 2. When the function is enabled, an "Attribute" option is added to the address book destination registration steps. As an address book destination is programmed, an extra step showing Attribute 1, Attribute 2, Attribute 3, and Attribute 4 are added as the last step.





3. Set the individual bit positions as shown in the following table. To change a setting, press[◀]or[▶]until the cursor is below the desired bit position; then press <1> or <0> to make the change.



- 4. Press <Enter> to save the setting of the displayed attribute and advance to the next attribute.
- 5. To set the other attribute, repeat steps 3-4.
- 6. When the last attribute is set, the fax will advance to the next autodialer programming steps.

# Attribute 1 - Individual Autodialer Setting (Equivalent to Memory Switch 010)

										<u>-9 (-</u>					-		
Switch	Initial Setting		Adjust								Usa	ge/Co	mme	nts			
7	1	Busy 0: N 1: Yo	-	e de	tecti	on			Sets this switch to "0" if the ring tone of remote unit is mistaken for a busy signal.								
6	0	Set a	at 0: at 1:	24 2 tin	00 nes	48 2 ti	300		nes 2	600 times times	2	400 times times					
5	0	Ove 0: No 1: Yo	-	s mo	de				the CE	ED sig	gnal rans	(2100 smits t	Hz). the D0	Also i	gnores	sabled by the first D response t	)IS
4	0	V.29 0: N 1: Y	-	no Pr	otec	t tor	ne		suppro transn receiv proteo secon	essior nitted er no et the d Ech	n wil info t to r rece no Pi	I cut to rmation received in the contract of t	he be on whi e the mage tone	ginnin ich ma trainir from is plac	g porti ay caus ng and degrac ced pri	with echo on of the se the data. To ding, a 0.5 or to the raining	
3	1						eed ( 14.4				24	26.4	28.8	31.2	33.6		
2	1	0	0 0	0 0	0 0	0 1	0 1	0 1	0 1	1 0	1 0	1 0	1 0	1 1	1 1		
1	0	0	0 1	1 0	1 1	0 0	0 1	1 0	1 1	0 0	0 1	1 0	1 1	0 0	0 1		
0	1																

# Attribute 2 - Individual Autodialer Setting (Equivalent to Memory Switch 011)

Switch	Initial Setting	Adjust Usage/Comments
7	0	The time between reception of CFR and transmission of data
		When CFR and data overlap due to line echo, increase the interval between CFR
		and data transmission using this switch.
6	1	
		250 ms 500 ms 750 ms 1000 ms
		Switch 7 0 0 1 1
		Switch 6 0 1 0 1
5	0	Interval between DCS and TCF
		When FTT is received after DCS and TCF signals due to line echo, increase the
		interval between DCS and TCF signals using this switch.
4	0	
		75 ms 300 ms 450 ms 600 ms
		Switch 5 0 0 1 1
		Switch 4 0 1 0 1
3	*	
2	*	Output attenuation See table below.
1	*	
0	*	

#### Output attenuation when individual autodialer attributes are set.

Switch	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	-0
	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB
3	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
2	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0
1	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0
0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0

## Attribute 3 - Individual Autodialer Setting (Equivalent to Memory Switch 012)

7111100	100	marviadai Adtodiaioi	octing (Equivalent to Memory Switch 612)
Switch	Initial Setting	Adjust	Usage/Comments
7	0	Factory use only	
6	0	Factory use only	
5	0	Changing the date format of the transmitted TTI 0: No 1: Yes	When set to "1", the machine changes the date format of the transmitted TTI from MM: DD: YY, or vice versa.
4	1	TTI transmit 0: No 1: Yes  (Note: Turning TTI transmission off may violate local or federal regulations.)	When set at "0", transmission of the TTI is disabled. The TTI includes the followings:  • Sender name  • Sender's fax number  • Data & time, and number of pages  To set the individually transmission of them, see Memory SW 016.
3	0	ECM response time 0: 3 sec 1: 4.8 sec	The time limit to receive the response signal for the ECM post message.
2	0	ECM error retransmit time 0: 200 ms 1: 400 ms	The time limit before the ECM error is retransmitted.
1	0	Interval between DIS and DCS	
0	0	0 ms 500 ms 1000 Switch 1 0 0 1 Switch 0 0 1 0	ms 1500 ms 1 1

# Attribute 4 - Individual Autodialer Setting (Equivalent to Memory Switch 013)

Switch	Initial Setting	Adjust	Usage/Comments
7	0	ANSam detection 0: Yes 1: No	During the V8 handshake, if some noise disturbs the handshake and an error occurs, set to "1".
6	0	V.34 transmission 0: Yes 1: No	Individual setting for V.34 transmission.
5	0	Factory use only	
4	0	ECM mode 0: On 1: Off	Determines ECM mode. ECM mode reduces document memory and may lengthen transmission and reception times.
3	0	Retransmit automatically when receiving RTN/PIN signals 0: Yes 1: No	When set to "1", retransmission disables automatically if receiving RTN/PIN signals.
2	1	Factory use only	
1	0	Factory use only	
0	0	Factory use only	

#### 3.5 All RAM Clear

The All RAM Clear setting will erase all user-programmed information, all documents in memory, and reset the memory switches and unique switches to factory defaults.

This feature may also be used to try and clear a machine malfunction or lock up. If possible, when the All RAM Clear is used to reset a malfunction or lock up, it is advisable to print the machine settings, one-touch and speed dial listings to help in reprogramming this information.

**Note:** The All RAM Clear does not clear the machine parameters, life monitor and consumable order sheet. If you need to clear them, see "Clearing the machine parameters" on page 3-4, "Clear Life Monitor" on page 3-132 or "Clear consumable order sheet" on page 3-131.

1. To perform an All RAM Clear, from standby, press <Setting>, <\*>, <0>, <3>.



2. Press [Yes].

Note: To finish the operation without performing RAM clear, press [No].

# 3.6 Clear Programmed Data / User Settings

User programmed information such as address book entries, date, time, Transmit Terminal Identifier (TTI), Subscriber ID, etc., are stored in the unit's Random Access Memory (RAM). A battery back up holds this information, when the power is lost.

This function does not clear the machine parameters, memory switches and unique switches. Therefore, this setting is useful to reset the user-programmed information but leave specific parameters and switches configured for a particular telephone system, etc.

To reset only each switch, see page 3-4, 3-50 and 3-80.

**Note:** If desired, the All RAM Clear setting can be used to erase all users programmed information, all documents in memory, and reset the memory switches and unique switches to factory defaults. For information on the All RAM Clear setting, see the next page.

1. To clear programmed data and user settings, from standby, press <Setting>, <\*>, <0>, <2>.



2. Press [Enter].

Note: To finish the operation without performing initialization, press [Cancel].

# 3.7 Unique Switch Adjustment

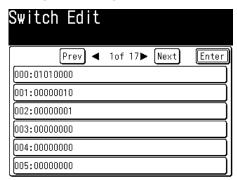
#### 3.7.1 Setting the Unique Switches

These switches are used to program internal machine parameters. The primary back up battery maintains these settings if power is lost.

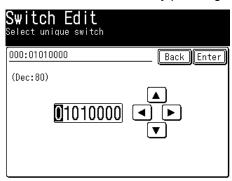
1. From standby, press <Setting>, <\*>, <0>, <4>.



2. Press [Switch Edit].



- 3. Call up the desired switch by pressing  $[\P]$  or  $[\blacktriangle]$ , or by pressing the numeric keypad.
- 4. Select the desired switch by pressing the box.



- 5. To navigate through the unique switch settings:
  - The bits are ranged from 7 (left) to 0 (right).
  - Press [◀]or[▶] of the cursor key to move the cursor.
  - Press <0> or <1> on the numeric keypad, or [▼] or [▲], to change the bit value.
  - Press [Enter] to save the setting of the displayed unique switch and return to the unique switch edit screen.
  - Press [Back] not to save the setting of the displayed unique switch.
- 6. If you want to set other unique switches, repeat step 3-5. Otherwise, proceed to step 7.
- 7. Press [Reset] to return the machine to standby.

#### 3.7.2 Clearing the Unique Switches

Resets the unique switches to factory defaults.

- 1. From standby, press <Setting>, <\*>, <0>, <4>.
- 2. Press [Switch Clear].



3. Press [Yes]. The unique switches will reset to factory defaults.

Note: To finish the operation without clearing the switches, press [No].

4. Press [Reset] to return the machine to standby.

#### About the "O" symbol at the list

The "O" at the list indicates that you can set the switch respectively for the second phone line. See "3.25 Multi Line Settings" on page 3-141 for the setting.

## Unique Switch 000 — Dialer

	Switch	Initial Setting	Adjust Usage/Comments
	7	0	Factory use only
0	6	1	Congestion tone detection 0: No 1: Yes  Setting this switch to "0" ignores telephone line congestion tones.
	5	0	Ring back tone wait time (seconds)  Sets the time until the ring back tone begins after answering an incoming call in the Fax/Tel Ready or Tel/Fax Ready mode.
	4	1	Switch 5: 0 0 1 1 Switch 4: 0 1 0 1
	3	0	Factory use only
	2	0	Factory use only
	1	0	Factory use only
	0	0	Factory use only

## **Unique Switch 001 — Dialer**

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Factory use only	
6	0	Factory use only	
5	0	Factory use only	
4	0	Factory use only	
3	0	Factory use only	
2	0	Factory use only	
1	1	Enable the dial prefix key 0: No 1: Yes	
0	0	Factory use only	

Unique Switch 002 ~ 009 — Factory use only

# Unique Switch 010 — Transmission

	Switch	Initial Setting	Adjust	Usage/Comments
	7	1	Factory use only	
	6	0	Factory use only	
	5	1	Factory use only	
	4	0	Factory use only	
	3	1	document a 0: No le 1: Yes ir	Setting this bit to "0" transmit the document length added with the TTI. Setting it to "1" transmit the ength including TTI inside the document. However in this case, the image at the top of the document night be overlapped with TTI.  TTI length: 4.2mm)
	2	0	Factory use only	
	1	1	The number of times PPR is dete	
0			1 time 2 times 3 times 4 times	S
	0	1	0 0 1 1 0 1	

Unique Switch 011 ~ 014 — Factory use only

## **Unique Switch 015 — Transmission**

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Factory use only	
6	0	Factory use only	
5	0	Not used	
4	0	Factory use only	
3	0	Factory use only	
2	1	Factory use only	
1	1	Factory use only	
0	1	V.8 handshake in manual Tx	Determine I the handshaking will be done with V.8
		0: No	recommendation if manual transmission.
		1: Yes	

## **Unique Switch 016 — Transmission**

Switch	Initial Setting	Adjust	Usage/Comments
7	1	Available *, # and space upon <i>F-code</i> box registration 0: No 1: Yes	Determines if the * (asterisk), # (sharp) and space are available upon <i>F-code</i> box registration.
6	1	Available *, # and space upon <i>F-code</i> communicating 0: No 1: Yes	Determines if the * (asterisk), # (sharp) and space are available upon <i>F-code</i> communicating.
5	0	Ignore space in <i>F-code</i> ID 0: Yes 1: No	Determines if checking the space stored in the <i>F-code</i> ID.
4	1	F-code sub-frame off 0: Send 1: Not send	Do not send the sub-address and password of F-code box when a point of sending DCS signal after EOM signal.
3	0	Send F-code box's TTI 0: No 1: Yes	Transmit the sub-address and box name of F-code box with F-code polling document.
2	0	Factory use only	
1	0	Retrieve document 0: No 1: Yes	Retrieve the document received in F-code SecureMail box by polling transmission.
0	1	Ignore F-code bit 0: No 1: Yes	Neglect SEP bit of DTC signal or SUB bit of DCS signal at F-code polled transmission.

**Note:** The "F-code communication" is possible the SecureMail and Polling operation using the F-code (SUB/SEP/PWD/SID). However, it is not based on T.33 recommendation.

## **Unique Switch 017 — Transmission**

	Switch	Initial Setting	Adjust	Usage/Comments
	7	0	Factory use only	
	6	0	Factory use only	
	5	0	Factory use only	
	4	0	Factory use only	
	3	0	Factory use only	
	2	0	Factory use only	
0	1	1	JBIG transmission 0: No 1: Yes	Determines if the JBIG transmission is available.
	0	0	Factory use only	

## **Unique Switch 018 — Transmission**

	Switch	Initial Setting	Adjust	Usage/Comments
	7	0	Factory use only	
	6	0	Factory use only	
	5	1	Factory use only	
0	4	0	Disconnect the line when the transmission speed falls down under 7200 bps 0: No 1: Yes	Determine if the machine disconnect the phone line when the transmission speed fall down under 7200 bps.
0	3	0	Disconnect the line when the transmission speed falls down under 4800 bps 0: No 1: Yes	Determine if the machine disconnect the phone line when the transmission speed fall down under 4800 bps.
	2	0	Factory use only	
	1	1	Factory use only	
0	0	0	Transmission when disable to detect first NSF in real time transmission.  0: Retry to detect NSF  1: Transmit with the standard protocol	Determines the action when disable to detect first NSF in real time transmission.

## Unique Switch 019 — Factory use only

## Unique Switch 020 — Reception

	Switch	Initial Setting	Adjust	Usage/Comments
	7	0	Factory use only	
	6	0	Factory use only	
	5	1	No use	
0	4	1	Transmit CED signal 0: No 1: Yes	Determines if sending CED signal.
	3	1	Pseudo-ring start time (seconds)  5 6 8 10	Sets the time the pseudo-ring begins after answering an incoming call. (Fax/Tel Ready or Tel/Fax Ready mode only.)
	2	0	Switch 3: 0 0 1 1 Switch 2: 0 1 0 1	
	1	1	Printout the pages completed to receive during receiving into memory 0: No 1: Yes	Determines if whether to printout the page which data is completed to receive during receiving it into fax's memory.
	0	1	Avoid time out in ECM reception 0: No 1: Yes	Disables 60 seconds RNR time out in ECM mode.

# Unique Switch 021 — Reception

	Switch	Initial Setting	Adjust	Usage/Comments
	7	0	Factory use only	
	6	1	Factory use only	
	5	1	Factory use only	
	4	0	Factory use only	
0	3	1	TCF check time	If the TCF time is such that poor image quality is the
•			(in 100 ms units)	result, lengthen the TCF check time.
				Curitab 2.0.1.0 Time
	0			Switch 3 2 1 0 Time
	2	0		0 0 0 0 0 ms 0 0 0 1 100 ms
				0 0 1 0 100 ms
				0 0 1 0 200 ms
				0 1 0 0 400 ms
				0 1 0 1 500 ms
	1	1		0 1 1 0 600 ms
				0 1 1 1 700 ms
				1 0 0 0 800 ms
				1 0 0 1 900 ms
				1 0 1 0 1000 ms ← Initial setting
	_			1 0 1 1 1100 ms
	0	0		1 1 0 0 1200 ms
				1 1 0 1 1300 ms 1 1 1 0 1400 ms
				1 1 1 0 1400 ms 1 1 1 1 1500 ms
				1111 13001115

## **Unique Switch 022 — Reception**

	Switch	Initial Setting	Adjust	Usage/Comments
	7	0	Factory use only	
	6	1	Factory use only	
	5	1	Factory use only	
	4	0	Factory use only	
0	3	1	JBIG reception 0: No 1: Yes	Determines how documents from the remote fax are received.
	2	0	Receive the junk fax 0: Yes 1: No	When the block junk fax feature is set to Mode 2 and the fax does not receive the TSI signal from the remote fax, determine if receiving the fax other than the remote fax number set to the block junk dial list.
	1	0	Factory use only	·
	0	0	Factory use only	

## Unique Switch 023 — Reception

0

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Factory use only	
6	0	Factory use only	
5	0	Factory use only	
4	0	Factory use only	
3	0	Factory use only	
2	1	Receiving fax in 600 dpi (S-fine) 0: No 1: Yes	Sets whether to receive fax in 600 dpi.
1	0	Factory use only	
0	0	Factory use only	

## Unique Switch 024 ~ 028 — Factory use only

## Unique Switch 029 — Reception

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Factory use only	
6	0	Displays the message "No Network Connection." 0 : Yes 1 : No	Set this switch to "1" will delete the message "No Network Connection." Use this switch if the machine is not used in a network.
5	0	Factory use only	
4	0	Factory use only	
3	0	Factory use only	
2	1	Factory use only	
1	0	Factory use only	
0	0	Factory use only	

## Unique Switch 030 — Modem

	Switch	Initial Setting	Adjust	Usage/Comments
	7	0	Factory use only	
	6	0	Factory use only	
0	5	1	3429 baud symbol rate when communicating at V.34 0: No 1: Yes	If the error frame often occurs because of the symbol rate is too high, setting this switch to "1" mask that symbol rate and keep down the occurrence of error frame.
0	4	1	3200 baud symbol rate when communicating at V.34 0: No 1: Yes	
0	3	1	3000 baud symbol rate when communicating at V.34 0: No 1: Yes	
0	2	1	2800 baud symbol rate when communicating at V.34 0: No 1: Yes	
	1	0	Factory use only	
0	0	1	2400 baud symbol rate when communicating at V.34 0: No 1: Yes	See above (switch 5 to 2).

# Unique Switch 031 — Modem

	Switch	Initial Setting	Adjust	Usage/Comments
$\circ$	7	0	Forced 2400 symbol rate	SNR means that Signal Noise Ratio.
9	6	0	when probing SNR is adverse	If the SNR is less than the threshold you set,
	5	0		the modem overrides the bandwidth evaluation
	4	1		algorithm and forces the symbol rate to2400 baud.
	3	0		
	2	1		
	1	0		
	0	0		

## Unique Switch 032 — Modem

	Switch	Initial Setting	Adjust	Usage/Comments
	7	0	Factory use only	
	6	0	Factory use only	
	5	0	Factory use only	
	4	1	Factory use only	
	3	0	Factory use only	
•	2	1	ANSam output time 0: 3 sec 1: 4 sec	The time limit to output the ANSam (A sinewave signal at 2100 Hz amplitude-modulated). Sets to "1" when the V.8 handshake is hard to achieve.
	1	0	Factory use only	
	0	1	Factory use only	

## Unique Switch 033 — Factory use only

## Unique Switch 034 — Modem

	Switch	Initial Setting	Adjust Usage/Comments
	7	0	Symbol rate adjustment When re-transmission occurs frequently, set to "0".
			0: Yes When set to 1, the re-transmission may become
			1: No not to be occurred.
a	6	0	Symbol rate adjustment. Adjust the symbol rate selected by the link.
	5	0	Switch 6 5 4 FLAT 2Link 3Link 4Link 5Link 6Link 7Link
	4	0	0 0 0 : 3429 3429 3200 3000 3000 3000 2800
			0 0 1 : 3429 3200 3200 3000 3000 3000 2800
			0 1 0 : 3429 3200 3000 3000 3000 3000 2800
			0 1 1 : 3200 3200 3000 3000 3000 3000 2800
			1 0 0 : 3200 3200 3000 3000 3000 2800
	3	0	No use
	2	0	No use
	1	0	No use
	0	0	No use

Unique Switch 035 ~ 036 — Factory use only

# Unique Switch 037 — Modem

	Switch	Initial Setting	Adjust	Usage/Comments
	7	0	Factory use only	
	6	0	Factory use only	
	5	0	Factory use only	
0	4	0	The delay before post- message is transmitted	If retraining occurs due to the low reception signal level and few delay of the telephone line, it may overlap the second post-message. In this case, increase the delay before the post-message is transmitted.
	თ	0		0 ms 100 ms 200 ms 300 ms Switch 4: 0 0 1 1 Switch 3: 0 1 0 1
	2	0	Factory use only	
	1	0	Factory use only	
	0	1	Factory use only	

Unique Switch 038 ~ 039 — Factory use only

## Unique Switch 040 — Factory use only

## Unique Switch 041 — Scanner

Switch	Initial Setting	Adjust	Usage/Comments
7	1	Set the fixed ratio for copy and the auto ratio in detail 0: No 1: Yes	When set to "1", the ratio will be calculated in detail automatically according to the document size and the recording paper size.
6	1	Factory use only	
5	0	Factory use only	
4	0	Factory use only	
3	1	Factory use only	
2	0	Factory use only	
1	0	Factory use only	
0	1	Factory use only	

## Unique Switch 042 ~ 043 — Factory use only

## **Unique Switch 044 — Scanner**

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Factory use only	
6	0	Factory use only	
5	0	Factory use only	
4	0	Factory use only	
3	0	Factory use only	
2	0	Set background level when the machine turned on 0: No 1: Yes	When set to "1", the machine will set its background level at power-on.
1	0	Factory use only	
0	0	Factory use only	

## Unique Switch 045 ~ 047 — Factory use only

## Unique Switch 048 — Scanner

Omque	• • • • • • • • • • • • • • • • • • • •	o io oddiiiioi		
Switch	Initial Setting	Adjust	Usag	e/Comments
7	0	Factory use only		
6	0	Factory use only		
5	0	Leading edge document	Switch 5 4 3 2 1 0	Settings
4	0	margin adjustment upon		0 mm
3	0	scanning using FBS.	000001	1 mm
2	0		000010	2 mm
1	0	Adjusts the leading edge	000011	3 mm
0	0	margin when scanning	000100	4 mm
		document by FBS.	000101	5 mm
		Fook patting abanges by	000110 000111	6 mm
		Each setting changes by 1 mm.	00111	7 mm 8 mm
		1 111111.	001000	9 mm
			001001	10 mm
			001010	11 mm
			001011	12 mm
			001101	13 mm
			001110	14 mm
			001111	15 mm
			010000	16 mm
			010001	17 mm
			010010	18 mm
			010011	19 mm
			010100	20 mm
			010101	21 mm
			010110	22 mm
			010111	23 mm
			011000	24 mm
			011001	25 mm
				60
			111111	63 mm

## Unique Switch 049 — Scanner

Switch	Initial Setting	Adjust	Usag	e/Comments
7	0	Factory use only		
6	0	Factory use only		
5	0	Trailing edge document	Switch 5 4 3 2 1 0	Settings
4	0	margin adjustment upon	000000	0 mm
3	0	scanning using FBS	000001	1 mm
2	0		000010	2 mm
1	0	Adjusts the trailing edge	000011	3 mm
0	0	margin when scanning	000100	4 mm
0	U	document by FBS.	000101	5 mm
			000110	6 mm
		Each setting changes by	000111	7 mm
		1 mm.	001000	8 mm
			001001	9 mm
			001010	10 mm
			001011 001100	11 mm 12 mm
			001100	12 mm
			001101	14 mm
			001110	15 mm
			010000	16 mm
			010001	17 mm
			010010	18 mm
			010011	19 mm
			010100	20 mm
			010101	21 mm
			010110	22 mm
			010111	23 mm
			011000	24 mm
			011001	25 mm
			:	
			111111	63 mm

## Unique Switch 050 — Printer

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Factory use only	
6	0	Factory use only	
5	1	Factory use only	
4	1	Factory use only	
3	0	Smoothing in H-Fine (400 x 400 dpi) mode 0: No 1: Yes	Smoothes the data scanned in each resolution mode.
2	1	Smoothing in S-Fine (200 x 400 dpi) mode 0: No 1: Yes	
1	0	Smoothing in Fine mode 0: No 1: Yes	
0	1	Smoothing in Normal mode 0: No 1: Yes	

# Unique Switch 051 — Factory use only

# Unique Switch 052 — Printer

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Factory use only	
6	0	Factory use only	
5	0	Factory use only	
4	0	Factory use only	
3	0	Factory use only	
2	1	Factory use only	
1	0	Factory use only	
0	0	Printing margin adjustment	
		0: Normal	
		1: No margin	

## **Unique Switch 053 — Printer**

Switch	Initial Setting	Adjust		Usage/0	Comments
7	0	Printer density adjustment.	Switch	76543210	Settings
6	0				
5	0			00000000	Not available
4	0			00000001	Lightest
3	0			00000010	:
2	1			00000011	:
1	0			00000100	
1	0			00000101	Normal ← Initial setting
0	] 1			00000110	:
				00001001	Darkest
				00001011	Not available
				:	$\downarrow$

Unique Switch 054 ~ 059 — Factory use only

## Unique Switch 060 — Remote reception

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Factory use only	
6	0	Factory use only	
5	0	Factory use only	
4	0	Factory use only	
3	1	Factory use only	
2	0	Use numeric keypad on the fax using second phone 0: No 1: Yes	Determines if using the numeric keypad on the control panel of the fax using the second phone.
1	1	Manual transmit/receive using Start key after off-hook of second phone 0: No 1: Yes	Determines if transmitting or receiving manually using Start key after off-hook of the second phone.  Note: To enable this function Unique Switch 060: 2 must also set to "1"
0	0	Silent detection 0: No 1: Yes	Enables or disables silent detection during Ans/Fax Ready mode.

# Unique Switch 061 ~ 063 — Factory use only

## Unique Switch 064 — Remote reception

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Factory use only	
6	0	Factory use only	
5	0	Factory use only	
4	0	Factory use only	
3	0	Load 24V to TEL 2 line 0: No 1: Yes	When set to "1", 24 V will be loaded to TEL 2 in communication.  Note: Set to "1" in 064 bit 0 when make this feature available.
2	0	Factory use only	
1	0	Factory use only	
0	0	Set the relay of TEL 2 in Silent receiving 0: On 1: Off	When set to "1", TEL 2 does not ring in the silent receiving.

## Unique Switch 065 ~ 066 — Factory use only

## Unique Switch 067 — Remote reception and TAD interface

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Factory use only	
6	1	Detect busy tone during pseudo-ring ringing 0: No 1: Yes	
5	0	No use	
4	0	CNG detection during OGM output in ANS Ready 0: Yes 1: No	
3	0	Number of detection DTMF	Sets the number of detection the DTMF during Ans/Fax Ready mode.  Switch 3 2 1 0 Number of detection 0 0 0 0 Not detect
2	0		0 0 0 1 1 0 0 1 0 2 0 0 1 1 3 Initial setting 0 1 0 0 4 0 1 0 1 5
1	1		0110 6 0111 7 1000 8 1001 9 1010 10
0	1		1 1 1 1 15

Unique Switch 068 and 069 — Factory use only

# **Unique Switch 070 — Operation**

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Factory use only	
6	1	LCD error message 0: Remains in LCD 1: Returns to standby	After an error message has printed, the setting of this switch determines if the error message will remain in the display.
5	1	Factory use only	
4	0	Factory use only	
3	0	Factory use only	
2	0	Factory use only	
1	0	Factory use only	
0	0	Factory use only	

# **Unique Switch 071 — Operation**

Switch	Initial Setting	Adjust	Usage/Comments
7	1	Line monitor in Quick memory transmission 0: Off 1: On	
6	0	Factory use only	
5	1	Factory use only	
4	0	Factory use only	
3	0	Factory use only	
2	0	Factory use only	
1	0	Rx document to polling document 0: No 1: Yes	Retrieve the document received in the memory by polling transmission.
0	0	Factory use only	

# **Unique Switch 072 — Operation**

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Factory use only	
6	0	Factory use only	
5	1	Factory use only	
4	0	Factory use only	
3	1	Effect charge setting in department mode 0: No 1: Yes	When this bit is set to "1", the following available:  Input the price rate per page for transmission  Print transmission charge on the department list
2	0	Send service report 1: No 2: Yes	
1	0	Factory use only	
0	0	Factory use only	

# Unique Switch 073 — Factory use only

# **Unique Switch 074 — Operation**

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Factory use only	
6	0	Factory use only	
5	0	Factory use only	
4	0	Factory use only	
3	0	Prohibit double registration 0: No 1: Yes	When set to "0", the same phone number can be registered in the address book.
2	1	Priority of consumable order sheet printing  0: Print after the current printing job is completed 1: Print immediately	When the drum cartridge has reached its design life, or the toner cartridge is empty, the machine prints a consumable order sheet.  When this switch is set at "0", the machine will not print consumable order sheet until the current printing job is finished.
1	0	Print the transmission time on TCR 0: Print the transmit time 1: Blank	When set to "0", the transmission time will be printed on TCR.
0	1	When receive a fax message during Auto power off mode, the LCD will be in standby mode 0: No 1: Yes	

# Unique Switch 075 — Factory use only

## **Unique Switch 076 — Operation**

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Journal report sorting order	
		0 : From the latest 1 : From the oldest	
6	0	Factory use only	
5	0	Factory use only	
4	0	Factory use only	
3	1	Factory use only	
2	0	Factory use only	
1	0	Factory use only	
0	0	Factory use only	

# Unique Switch 077 — Factory use only

# **Unique Switch 078 — Operation**

Switch	Initial Setting	Adjust	Usage/Comments
7	1	Default letter of QWERTY	
		keypad	
		0 : Upper case	
		1 : Lower case	
6	0	Factory use only	
5	0	Factory use only	
4	0	Factory use only	
3	1	Factory use only	
2	0	Factory use only	
1	0	Factory use only	
0	0	Factory use only	

# Unique Switch 079 — Factory use only

# Unique Switch 080 and 081 — Factory use only

# Unique Switch 082 — Miscellaneous

Switch	Initial Setting	Adjust	Usage/Comments				
7	0	The time until the backlight is	If the keys are not used for the set time, the panel				
6	0	set to OFF	backlight will be turned off.				
5	0		Switch 7 6 5 4 3 2 1 0 Settings				
4	0	Each setting changes by	0 0 0 0 0 0 0 1 10 minutes (initial)				
3	0	10 minutes.	0 0 0 0 0 0 1 0 20 minutes				
2	0		0 0 0 0 0 0 1 1 30 minutes				
1	0		: 0 0 0 0 0 1 1 0 60 minutes				
0	1		:				
			0 0 0 0 1 0 1 0 100 minutes				
			:				
			: 1 1 1 1 1 1 0 250 minutes 1 1 1 1 1 1 1 255 minutes				

Unique Switch 083 ~ 084 — Factory use only

## **Unique Switch 085 — Miscellaneous**

•					
Switch	Initial Setting	Adjust	Usage/Comments		
7	0	Factory use only			
6	0	Print/Send the consumable order sheet when the drum is near end 0: Yes 1: No	<b>Note:</b> For this feature to work correctly, you must register several items. See "3.16 Consumable order sheet" page 3-126.		
5	0	Print/Send the consumable order sheet when toner is near empty 0: Yes 1: No	<b>Note:</b> For this feature to work correctly, you must register several items. See "3.16 Consumable order sheet" page 3-126.		
4	0	Factory use only			
3	0	"Next doc" default setting when scanning with ADF 0: No 1: Yes	Determine the default setting for "Next doc" scanning with ADF.  If it is set to "0" the default setting for Next doc is "No", if is "1" the setting is "Yes".		
2	1	"Next doc" default setting when scanning with FBS 0: No 1: Yes	Determine the default setting for "Next doc" scanning with FBS.  If it is set to "0" the default setting for Next doc is "No", if is "1" the setting is "Yes".		
1	0	Factory use only			
0	0	Multi T.30 monitor journal 0: No 1: Yes	If this setting is "Yes", the journal report will be printed not in the sequence number but in the table number to see the T.30 monitor.		

# Unique Switch 086 — Factory use only

# Unique Switch 087 — Miscellaneous

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Factory use only	
6	0	Factory use only	
5	0	Factory use only	
4	0	Factory use only	
3	0	Factory use only	
2	0	Print the sending document on the error massage sheet 0: No 1: Yes	
1	0	Factory use only	
0	0	Factory use only	

# Unique Switch 088 ~ 095 — Factory use only

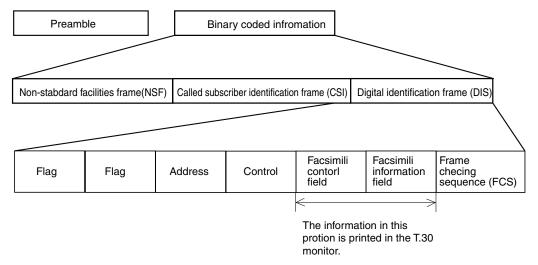
# **Unique Switch 096 — Miscellaneous**

Switch	Initial Setting	Adjust	Usage/Comments
7	0	Update the Flash ROM via USB cable 0: Unable 1: Able	Pressing <setting>, &lt;*&gt;, &lt;9&gt;, &lt;8&gt; enables the same operation. When updating the ROM via USB cable setting this bit to "0", set it back to "0" after update.</setting>
6	0	Multi line setting 0: No 1: Yes	This switch enables it to set the first and second line differently.
5	0	Factory use only	
4	0	Factory use only	
3	0	Factory use only	
2	1	Factory use only	
1	0	Factory use only	
0	0	Factory use only	

Unique Switch 097 ~ 099 — Factory use only

## **3.8 T.30 Monitor**

In all binary coded facsimile control procedures the HDLC frame structure is utilized. The basic HDLC structure is shown below.



The control signal is identified by FCF (Facsimile Control Field). Additional 8-bit octet information follows FIF (Facsimile Information Field) and FC (Facsimile Control Field) to further clarify facsimile procedures. This is added to DIS, DCS, DTC, CIS, CIG, TSI, NSC, NSF, and NSS signals.

#### 3.8.1 Print T.30 Monitor

This mode causes the unit to print a G3 procedural summary of the last fax communication.

1. From standby, press <Setting>, <\*>, <0>, <5>.

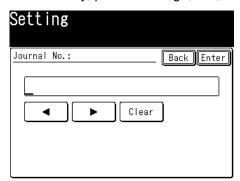


2. Press [Yes] to print the T.30 Monitor list.

#### 3.8.2 Multi T.30 Monitor

The communications on the journal list are able to print.

- 1. Set the unique switch for Multi T.30 monitor to "1 (On)". (Unique switch 85 switch 0)
- 2. Print the journal list and check the communication number of which to print the T.30 Monitor.
- 3. From standby, press <Setting>, <\*>, <0>, <5>.



- 4. Enter the communication number and press [Enter].
- 5. Press [Yes] to print the T.30 Monitor list.

# 3.8.3 How to see the print out

(Example for fax transmission)

ABC Fax 123-456-789

## \* \* T30 Monitor\* \*

Jun 15 2007 01:30pm

No.	Name	Mode	Start Time	Time	Page	User	Result	Note
001	123456789xxx	Fine	01,01:28pm	0' 21"	1		# O K	

#### 2050 USA A1A0A0

TxFrame	RxFrame	DATA
	ANS	
CM		E0 81 85 D4 90
	JM	E1 81 85 D4 90
Cl		
04" 25	CSI	40 36 34 30 35 32 37 36 35 37 30 20 20 20 20 20 20 20 20 20 20 20 20 20
	DIS	80 20 EE 9A C4 80 DD 83 80 80 E0 80 80 80 01
00" 00		[V17 JBG A3 5 H E]
TSI		43 39 38 37 20 36 35 34 20 33 32 31 20 20 20 20 20 20 20 20 20 20 20 20 20
DCS		83 00 42 F8 84 80 80 80 80 20
00" 32		[ JBG A4 0 F E]
00" 01	CFR	84
PIX		04 15
PPS.EOP		BF 2F 00 00 7B [3200 264]
00" 00	MCF	80
00" 00 DCN		FB

**ABC** 

Fax 123-456-789

#### \* \* T30 Monitor \* \*

Jun 15 2007 01:30pm

No.	Name	Mode	Start Time	Time	Page	User	Result	Note
001	123456789xxx	Fine	01,01:28pm	0' 19"	1		# O K	

#### 2050 USA A1A0A0

TxFrame	RxFrame	DATA
ANS		
	CM	E0 81 85 D4 90
JM		E1 81 85 D4 90
	CJ	
03"  NSF	86	20 00 00 45 81 41 42 43 20 20 20 20 20 20 20 20 20 20
INSI		20 20 20 80 C0 10
CSI		40 39 38 37 20 36 35 34 20 33 32 31 20 20 20 20 20 20
DIC		20 20 20
DIS		80 20 EE F8 C4 80 95 80 80 80 A0 80 80 80 01
00"	01	[V17 JBG A4 0 H E]
	TSI	43 36 34 30 35 32 37 36 35 37 30 20 20 20 20 20 20 20
	DCS	20 20 20 83 00 42 F8 84 80 80 80 80 20
	00	[ JBG A4 O F E]
CFR 00"	13	84
	PIX	04 16 1B 00 26
	PPS.EOP	BF 2F 00 00 49
	01	[3200 288]
MCF  00"	31	8C
	DCN	FB

TxFrame: Signals sent by machine printing T.30 report

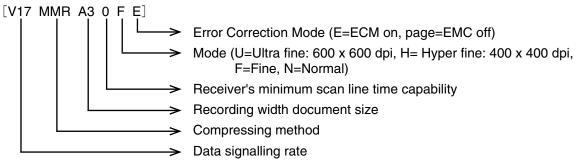
RxFrame: Signals received from remote machine

DATA: Additional 8-bit octet information to clarify facsimile procedures. In the list, the data are

in hexadecimal digits. At the top of each data shows the type of the signal.

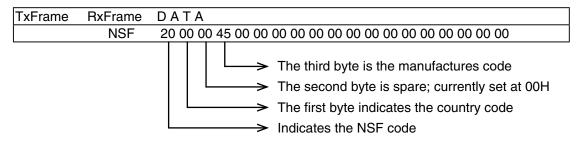
TCF: TCF check sequence

PIX : Image data



#### NSF, NSC, NSS:

NSF, NSC, NSS are nonstandard unit frames. The first three bytes of the FIF are specified by T.30. The subsequent digits are individually determined by the manufacturers. The first byte refers to the country code. The second byte is a spare; it is 00 (hex) presently. The third byte is the manufacturer code.



#### CSI, CIG, TSI:

CSI, CIG, TSI is composed of a maximum 20-digit number comprising the country code, area code, and subscriber's telephone number. In the printed results, printing starts from the least significant digit of the telephone number. The following code table lists the codes used to make the 20-digit number and their value. Below the code table is a CSI example.

Code	Value	Code	Value	Code	Value	Code	Value
20	Space	32	2	35	5	38	8
30	0	33	3	36	6	39	9
31	1	34	4	37	7	2B	+

An example telephone number of 123-456-7890 is represented as:

TxFrame	RxFrame	D A	A T A	١												
CIS		0	-	38 8 20	-	<b>35</b> 5	<b>34</b>	<b>33</b>	<b>32</b>	<b>31</b>	20	20	20	20	20	20

#### DIS, DTC, DCS:

DIS, DTC, DCS frames define the standard CCITT capabilities of the two units such as transmit and receive speeds, coding methods, printer speed, etc.

TxFrame	RxFrame	DATA
DIS		00 EF F9 C4 80 81 80 00

The bits are in the following order:

( 8 7 6 5 4 3 2 1) (16 15 14 13 12 11 10 9) (24 23 22 21 20 19 18 17) (32 31 30 29 28 27 26 25) (40 39 38 37 36 35 34 33) (48 47 46 45 44 43 42 41) (56 55 54 53 52 51 50 49) (64 63 62 61 60 59 58 57)

Table for hexadecimal digit to binary number:

Hex	Binary	Hex	Binary	Hex	Binary	Hex	Binary
0	0000	4	0100	8	1000	С	1100
1	0001	5	0101	9	1001	D	1101
2	0010	6	0110	Α	1010	E	1110
3	0011	7	0111	В	1011	F	1111

So in the above list the first "EF" is "11101111"(bit order 8 7 6 5 4 3 2 1)

## A transmission with PPR signal:

The error frame in fax reception is identified using the post-message signal and PPR signal.

TxFrame	RxFrame	DATA
PPS MPS		BF 4F 00 00 0F
	PPR	BC F0 00 FF
		FF

In PPS signal FIF, the pages, blocks and frames are displayed one value less than the real value. So in the above case:

Pages: 00 means one page Blocks: 00 means one block Frames: 0F means 16 frames

In PPR signal FIF, the error frame will be displayed with "1". In the above case the fist frame is "F0" and it means there was an error from frame 4 to 7.

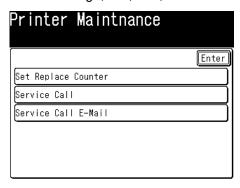
## 3.9 Printer maintenance mode

In case of followings, use this mode.

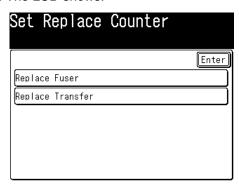
- When you have replaced the Fuser unit and/or Transfer roller.
- When "Call Service: XX" message appear in the LCD, access this mode to determine the cause of the "Call Service: XX" error message.
- To send the service error via e-mail, register the location using this mode.
- When you replace the Fuser unit or Transfer roller, you must set the count of replacement manually

To access the printer maintenance mode:

1. Press <Setting>, <\*>, <0>, <6>.



- 2. Press [Set Replace Counter].
- 3. The LCD shows:



- 4. If you have replaced the transfer roller skip to step7.
- 5. If you've replaced the fuser, select [Replace Fuser]. The LCD shows:



6. Press [Yes]. The machine goes back to standby mode.

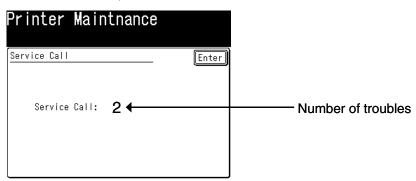
7. If you've replaced the transfer roller, select [Replace Fuser]. The LCD shows:



- 8. Press [Yes]. The machine goes back to standby mode.
- □ When "Call Service : XX" message is displayed on the LCD

To access the printer maintenance modes for determine the cause of the "Call Service : XX" error message.

- 1. Press <Setting>, <\*>, <0>, <6>.
- 2. Press [Service Call].
- 3. The kind of printer error will be displayed. If happens two or more troubles, the number of troubles is displayed on the right upper of the LCD. For example, when "Heater error" and "Drum Fuse Error" has occurred, the LCD shows 2.



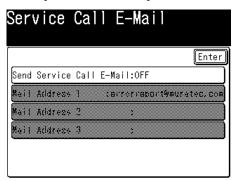
- 4. Press [Enter] to show the other printer error.
- 5. Press <Reset> to exit this mode.

**Note:** See "4.11.1 Call Service: XX" page 4-17 to 4-19 for the printer error messages and an explanation of each are outlined.

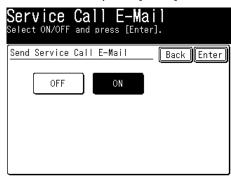
□ Register the e-mail location

To send the service error via e-mail, register the location using this mode.

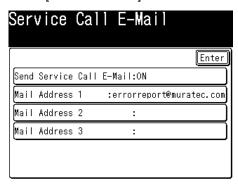
- 1. Press <Setting>, <\*>, <0>, <6>.
- 2. Press [Service Call E-mail].
- 3. Select [Send Call E-Mail].



4. Select "ON" and press [Enter].



5. Select [Mail Address 1].



6. To send the service report to the Muratec customer service, press [Enter].

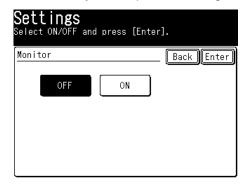
You may also edit the location and press [Enter].

- 7. To send the service report to another location, press [Mail Address 2]. Otherwise, skip to step 11.
- 8. Enter the e-mail address of the location using the numeric keypad.
- 9. Press [Enter] to save the setting.
- 10. To enter one more location, press [Mail Address 3], and repeat steps 8 and 9.
- 11. Press <Reset> to go back to the stand by mode.

# 3.10 Monitor speaker

If you need to monitor the signal of fax communication, turn this mode to on. You can hear the signal sound with machine's speaker during fax transaction.

1. From standby mode, press <Setting>, <\*>, <0>, <8>.



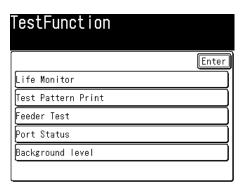
2. Press [On], and [Enter] to turn the mode on.

Note: To turn this mode off, perform step 1 and 2 by selecting [Off].

## 3.11 Test Modes

This mode offers the ability to print a test pattern and monitor certain unit output functions. Included are followings.

1. Press <Setting>, <\*>, <0>, <9> to enter the test mode.



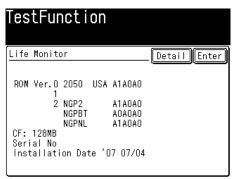
2. Select the desired test mode.

#### 3.11.1 Life Monitor

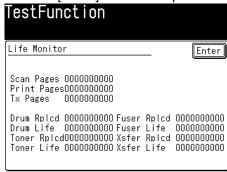
The life monitor displays the current software version, the total number of pages scanned, printed, and transmitted, the number of drums replaced and the total page count on the current drum.

Note: The All RAM Clear setting does not clear the life monitor. To clear, see below.

1. Press <Setting>, <\*>, <0>, <9>, then select [Life Monitor].



- ROM Ver.0 = displays the version of the machine ROM on the main control board
- 01 to 02 = displays software version of the optional kits
- NGP2 = displays version of network ROM on the NGP board
- NGPBT = displays version of network boot ROM on the NGP board
- NGPNL = displays version of the panel ROM
- 2. Press [Detail] to see the options.

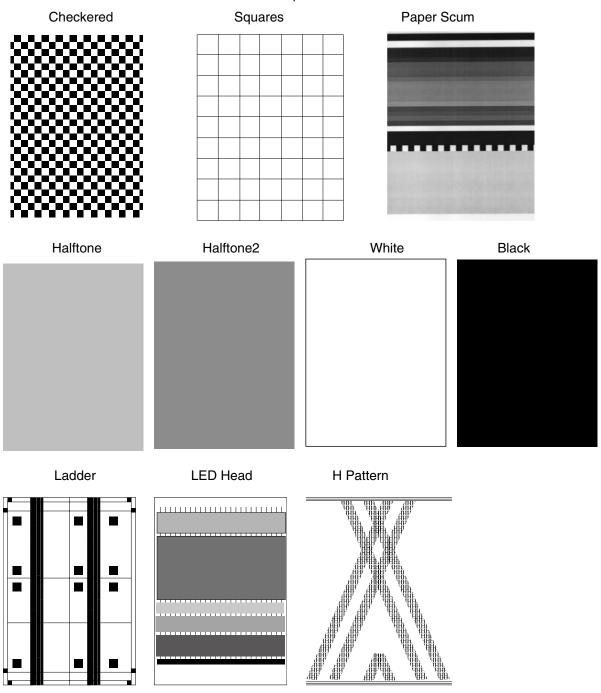


- Scan Pages = displays total pages scanned
- Print Pages = displays total pages printed
- Tx Pages = displays total pages transmitted
- **Drum Rplcd** = displays drum replaced times
- Drum Life = displays total pages printed on current drum

- Toner Rplcd = displays toner replaced count
- Toner Life = displays toner life
- Fuser Rplcd = displays fuser replaced count
- Fuser Life = displays fuser life
- Xsfer Rplcd = displays transfer roller replaced count
- **Xsfer Life** = displays transfer roller life
- 3. Press [Enter] to exit the display life monitor

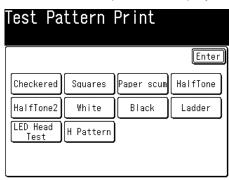
#### 3.11.2 Printer Test

The Printer Test mode offers seven different test patterns as shown below.

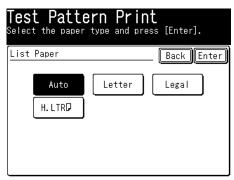


**Note:** DO NOT print the H Pattern, when there is a document in memory. Printing H Pattern with documents in memory may delete them all.

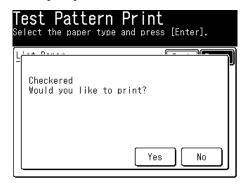
- 1. Press <Setting>, <\*>, <0>, <9>, then select [Test Pattern Print].
- 2. Select the desired pattern is displayed.



3. Select the paper size to test.



- 4. Press [Enter].
- 5. Press [Yes].



The selected pattern will be printed continuously.

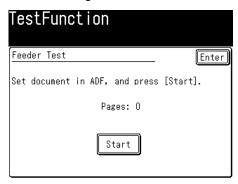
**Note:** Press <Stop> to stop printing.

6. To select another pattern, repeat the steps 1 to 4.

#### 3.11.3 Feeder test

The feeder test discharges all documents in the automatic document feeder at a constant speed and displays the document total in the LCD.

- 1. Load test documents into the automatic document feeder (ADF).
- 2. Press <Setting>, <\*>, <0>, <9>, then select [Feeder Test].



3. Press [Start] to start the feeder test.

The page number in the center of the LCD displays how many pages the ADF has fed.

4. Press <Stop> to exit the test mode.

#### 3.11.4 Port Status

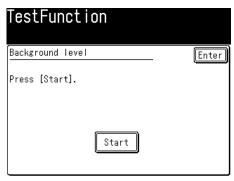
This test mode is not applicable to field service of this machine.

## 3.11.5 Set Background Level

The background level is an established threshold used to help measure the reflective ability of a scanned document. This threshold can change if the scanner lamp, CCD, or the ballast is replaced; therefore this mode should be used to reset the threshold when these items are changed. The Set Background Level mode allows the level to be set without erasing memory contents.

**Note:** The background seal at the inside of the scanner cover should be cleaned prior to setting the background level to ensure an accurate reading.

1. Press <Setting>, <\*>, <0>, <9>, then select [Background level].



2. Press [Start] to start the background level setting.

After the background level setting, the machine goes back to the standby mode.

# 3.12 Print Machine Parameters, Memory Switch and Unique Switch Settings

This function instructs the unit to print a list of the machine parameter, memory switch and unique switch settings. The list shows the default and current settings for each. After printing, the unit returns to standby.

1. Press <Setting>, <\*>, <1>, <0>.

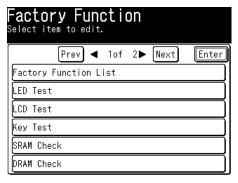


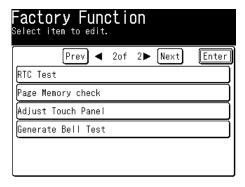
2. Press [Yes] to start printing.

# 3.13 Factory Functions

This factory functions provide several machine testes including LED and LCD tests, a keypad test, memory tests, a RTC test and other test functions.

1. Press <Setting>, <\*>, <1>, <1>.





#### 3.13.1 Function List

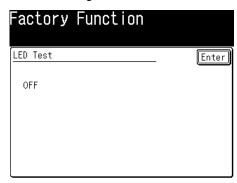
- 1. Press <Setting>, <\*>, <1>, <1>. Then select [Factory Function List].
- 2. Prss [Yes].

A list of the Factory Functions will be printed. After printing the unit will return to standby.



#### 3.13.2 LED Test

1. Press <Setting>, <\*>, <1>, <1>, then select [LED Test].

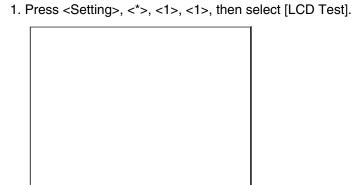


Pressing <Setting>, all LEDs will turn on. Pressing <Setting> twice, all LEDs will turn off.

2. Press <Reset> to exit the test mode.

### 3.13.3 LCD Test

This mode displays two test patterns in LCD.



Pressing <Setting>, all dots turn on.



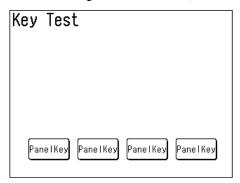
Next pressing <Setting>, all dots turn off.



2. Press <Reset> to exit the test mode.

## 3.13.4 Key Panel Test

1. Press <Setting>, <\*>, <1>, <1>, then select [Key Test].



2. As each button on the keypad is pressed, a representative name as show in the following table will be displayed.

Key	Indication in LCD	Key	Indication in LCD	
PRINTER	Printer	RESET	Reset	
COPY	Сору	ENERGY SAVE	Energy Save	
FAX	Fax	Numeric keys 0 through #	Tenkey 1 to #\$	
SCAN	Scan	START	Start	
Panel Key	Panel Key1 to 4	STOP	Stop	
SETTING	Setting	FAX CANCEL / JOB CONFIRM.	Fax Cancel	

3. Press <Stop> twice to cancel the key panel test.

**Note:**  $\underline{ }$  and  $\underline{ \mathbf{Q}}$  symbols are for factory use (for factory inspection).

#### 3.13.5 SRAM Check

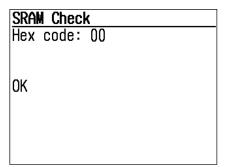
This mode is used to test the SRAM memory where user programmed parameters such as date, time, TTI, etc are stored.

Note: When this test is executed, the unit will perform an All RAM Clear.

The All RAM Clear erases all user settings and resets all memory switches, machine parameters and unique switches to factory defaults.

- 1. Press <Setting>, <\*>, <1>, <1>, then select [SRAM Check].
- 2. Enter the HEX code (00 ~ FF) using numeric keypad, then press <Start>. The HEX code is written to, then read from memory. After that, the result (OK/NG) will be shown in the display. Then the machine will return to factory function. Use the sharp key (#) to enter A, B, C, D, E and F. See table below.

Α	В	С	D	Е	F
#, 0	#, 1	#, 2	#, 3	#, 4	#, 5



The data are written to, then read from each address. The results are shown in the display. If the read/write test is successful, the display will show "OK".

If some portion of the read/write test fails, the display will show "NG" with the address and the data name.

3. Upon completion, the machine returns to the test mode.

#### 3.13.6 DRAM Check

This mode is used to test the DRAM memory, or document memory.

**Note:** When this test is performed, an All DRAM Clear will be performed by the unit. The All RAM clear erases all user settings and resets all memory switches, machine parameters and unique switches to factory defaults.

This is a read/write test that requires a few moments to complete.

Note: Perform a DRAM test whenever a memory upgrade is added to the unit.

1. Press <Setting>, <\*>, <1>, <1>, then select [DRAM Check].

	M Chec			
Hex	code:	_		

- 2. Enter the HEX code (00  $\sim$  FF) using numeric keypad and one-touch key [01] to [06], then press <Start>.
- 3. Depending on the amount of DRAM in the unit, press <0>, <1>, <2>, or <3> on the numeric keypad.

Please refer to the following table:

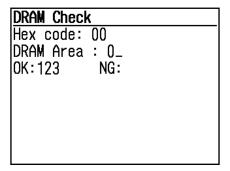
Note: Usually, press <0>.

Press	Check area
0	All DRAMs
1	The standard memory on the main control board
2	The first half of the 32MB Optional Memory PCB
3	The second half of the 32MB Optional Memory PCB

DRAM Check		
Hex code:	00	
DRAM Area	: _	

4. Press <Start>.

The machine starts checking and the result (OK/NG) will be shown in the display. For example, if the check area is "0" and one additional memory, you will see:



5. Press <Reset> to exit the test mode.

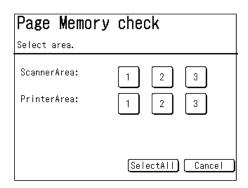
## 3.13.7 RTC(real time clock) Test

This test mode is not applicable to field service of this machine.

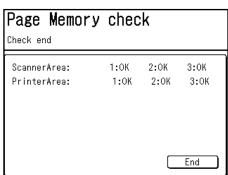
## 3.13.8 Page memory check

When the letters are not printed correctly, perform this test.

1. Press <Setting>,  $<^*$ >, <1>, <1>, then select [Page Memory check].



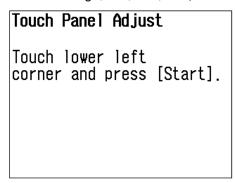
- 2. Select the desired checking area.
- 3. The machine starts checking and the result (OK/NG) will be shown in the display. If NG is shown, perform the DRAM clear (page 3-118), and then go back to step 1.



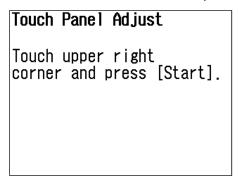
4. Press <Setting> to exit the test mode.

## 3.13.9 Touch panel adjustment

1. Press <Setting>, <\*>, <1>, <1>, then select [Adjust Touch Panel].



2. Touch the lower left corner of the panel, and press <Start>.



- 3. Touch the upper right corner of the panel, and press <Start>.
- 4. Press <Reset> to exit the test mode.

#### 3.13.10 Generate bell test

1. Press <Setting>, <\*>, <1>, <1>, then select [Generate Bell Test].



- 2. The bell stars ringing.
- 3. Press <Stop> to stop.

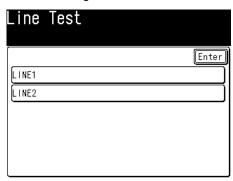
# 3.14 Line Tests

This mode offers several internal tests and ability to monitor certain unit output functions. Included are relay tests, modem signal output monitoring, and DTMF output monitoring.

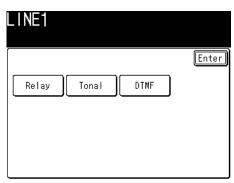
## 3.14.1 Relay Test

This mode tests the on/off operation of various relays and switches.

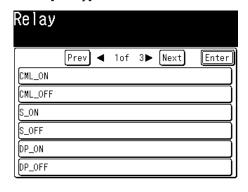
1. Press <Setting>, <\*>, <1>, <2>.



2. Select the line you want to test. If the optional second phone line is not attached, you can only test line1.



3. Select [Relay].



4. Select the relay you want to test. When it is selected, it will be highlighted.

CML relay – on	DP relay – on	L relay – on	RI relay – on
CML relay – off	DP relay – off	L relay –off	RI relay – off
S relay – on	H relay – on/	CONT24V relay – on	Hook key
S relay – off	H relay -off	CONT24V relay - off	

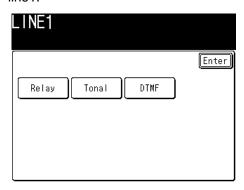
5. Press [Enter] to exit the relay test mode.

## 3.14.2 Tonal Signal Test

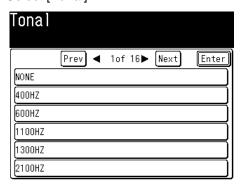
The tonal signal test permits the unit's output tones to be monitored.

**Note:** To monitor the tones, an external monitoring device must be connected to the telephone line jack.

- 1. Press <Setting>, <\*>, <1>, <2>.
- 2. Select the line you want to test. If the optional second phone line is not attached, you can only test line1.



3. Select [Tonal].



4. Select your desired tonal signal test. When it is selected, it will be highlighted.

Refer to the table below.

Note: It may take several moments for output signal to change.

Signal	Signal
None (stop signal)	V17_2400_7200_W1_B4 picture date
400 Hz tone	V17_2400_7200_W0_B1 picture date
600 Hz tone	V17_2400_7200_W4_B1 picture date
1100 Hz tone	V17_2400_9600_W1_B0 picture date
1300 Hz tone	V17_2400_9600_W1_B1 picture date
2100 Hz tone	V17_2400_9600_W1_B4 picture date
3000 Hz tone	V17_2400_9600_W0_B1 picture date
3400 Hz tone	V17_2400_9600_W4_B1 picture date
FSK WHITE	V17_2400_12000_W1_B0 picture date
FSK BLACK	V17_2400_12000_W1_B1 picture date
FSK _W1_B1	V17_2400_12000_W1_B4 picture date
V27_1200_2400 picture date	V17_2400_12000_W0_B1 picture date
V27_1600_4800 picture date	V17_2400_12000_W4_B1 picture date
V29_2400_7200 picture date	V17_2400_14400_W1_B0 picture date
V29_2400_9600 picture date	V17_2400_14400_W1_B1 picture date
V17_2400_7200_W1_B0 picture date	V17_2400_14400_W1_B4 picture date
V17_2400_7200_W1_B1 picture date	V17_2400_14400_W0_B1 picture date
	V17_2400_14400_W4_B1 picture date

Signal					
V34_2400_2400 ~ 21600					
V34_2800_4800 ~ 26400					
V34_3000_4800 ~ 28800					
V34_3200_4800 ~ 31200					
V34_34290_4800 ~ 33600					
VOICE					
MELODY					
GRBT					

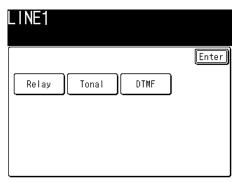
5. Press [Enter] to exit the relay test mode.

## 3.14.3 DTMF Output Test

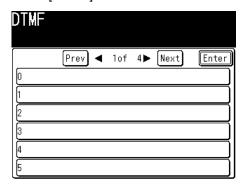
The DTMF output test permits the unit's DTMF tones to be monitored.

**Note:** To monitor the tones, an external monitoring device must be connected to the telephone line jack.

- 1. Press <Setting>, <\*>, <1>, <2>.
- 2. Select the line you want to test. If the optional second phone line is not attached, you can only test line1.



3. Select [DTMF].



4. Select your desired tonal DTMF tone. When it is selected, it will be highlighted.

Refer to the table on the next page.

Note: It may take several moments for output signal to change.

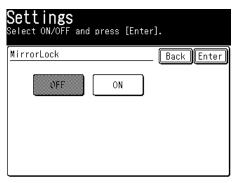
Display	Signal	Display	Signal
0	DTMF0 (941 Hz + 1336 Hz)	ROW1	ROW1 (697 Hz)
1	DTMF1 (697 Hz + 1209 Hz)	ROW2	ROW2 (770 Hz)
2	DTMF2 (697 Hz + 1336 Hz)	ROW3	ROW3 (852 Hz)
3	DTMF3 (697 Hz + 1477 Hz)	ROW4	ROW4 (941 Hz)
4	DTMF4 (770 Hz + 1209 Hz)	COL1	COL1 (1209 Hz)
5	DTMF5 (770 Hz + 1336 Hz)	COL2	COL2 (1336 Hz)
6	DTMF6 (770 Hz + 1477 Hz)	COL3	COL3 (1447 Hz)
7	DTMF7 (852 Hz + 1209 Hz)	COL4	COL4 (1633 Hz)
8	DTMF8 (852 Hz + 1336 Hz)		
9	DTMF9 (852 Hz + 1477 Hz)		
*	DTMF6* (941 Hz + 1209 Hz)		
#	DTMF# (941 Hz + 1477 Hz)		

- 5. To stop outputting the DTMF tone, press [Stop].
- 6. To select another DTMF tone, repeat steps 3-4. Otherwise, proceed to step 6.
- 7. To exit the DTMF output test, press <Setting> under not tests.
- 8. Press [Enter] to exit the relay test mode.

# 3.15 Mirror Carriage Transfer Mode

**Important:** The fax machine is shipped with mirror carriage locking plate for protecting the machine's s mirror carriage during shipping. When installing the fax, slide the scanner locking knob back to its unlocking position. Then turn the power on and perform the following:

1. Press <Setting>,< \*>, <1>, <4>.



#### 2. Select [OFF].

**Important:** If reshipping, turn on this mode to move the mirror carriage to the transport position. Then move the mirror carriage locking knob to "LOCK".

# 3.16 Consumable order sheet

When the drum cartridge is near end of its design life or the toner cartridge is near empty, the machine prints (or transmit) the consumable sheet.

#### \*\* Consumables Order Sheet \*\*

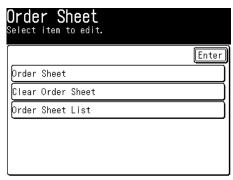
This toner unit is low, please fill out this sheet and fax it to [ ] to order a new one.  $\begin{tabular}{ll} \hline \end{tabular}$ 

2	Cust Name												
3	Cust Signature				Bloc	k Let	ter	4					
<b>⑤</b>	Delivery Address												
<b>6</b>	Cust Account #												
7	Unit.Serial #												
8	Cust Tel												
9	Cust Fax												
10	Order Item #									•			
11)	Item Description												
12	* Quantity		1										
13	Dealer Name												
14)	Dealer Code												
15)	Dealer Tel No												
16	Dealer Fax No												
17)	Dealer E-Mail												
18	Comments												
							0/	0/	0%/		0/	0/07	'0101

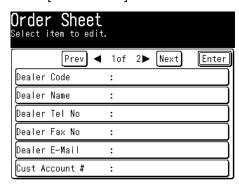
1	Dealer's fax number	13	Dealer's name
2	Customer's name	14	Dealer's code
3	Place of the customer write his/her	15	Dealer's telephone number
	signature		
4	Block letter of customer's signature	16	Dealer's fax number
5	Customer's address	17	Dealer's e-mail address
6	Customer's account	18	Comments
7	Serial number of the unit	19	Drum rotate time (x 10 seconds)
8	Customer's telephone number	20	Drum life time
9	Customer's fax number registered by Initial setting mode (Setting, User Install).	21	Drum used percentage
10	Order item	22	Total print pages
11	Description of the order item	23	Number of print pages after toner cartridge or drum unit was replaced
12	Quantity of the order item	24	ROM version

#### 3.16.1 Set consumable order sheet

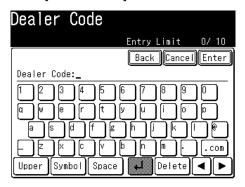
- 1. Clear the junk data, if necessary (see "Clear consumable order sheet," page 3-131).
- 2. Press <Setting>, <\*>, <1>, <5>.



3. Select [Order Sheet].



4. Press [Dealer Code]. Enter the Dealer's code. The code may be up to 10 characters in length.



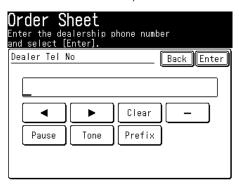
- 5. Press [Enter] to save the dealer's code.
- 6. Press [Dealer Name]. Enter the Dealer's name (Supplier's name). The name may be up to 30 characters in length.



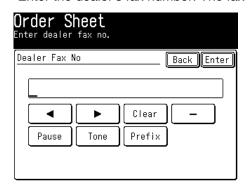
7. Select [Enter] to save the dealer's name.

8. Select [Dealer Tel No].

Enter the distributor's telephone number. The phone number may be up to 20 characters in length. To enter the numbers, use the numeric keypad.



- 9. Press [Enter] to save the dealer's telephone number.
- Select [Dealer Fax No].
   Enter the dealer's fax number. The fax number may be up to 20 characters in length.



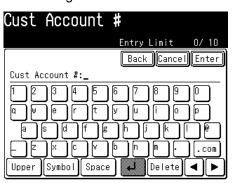
- 11. Press [Enter] to save the dealer's fax number.
- 12. Select [Dealer E-Mail].

Enter the dealer's e-mail address. The address may be up to 50 characters in length.



- 13. Press [Enter] to save the dealer's address.
- 14. Select [Cust Account #].

Enter the customer's account number. The customer's account number may be up to 10 characters in length.



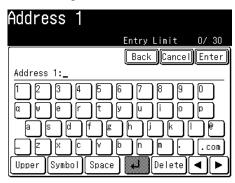
- 15. Press [Enter] to save the customer's code.
- 16. Select [◀] or [▶] to go to the next menu items.
- 17. Select [Cust Name].

Enter the customer's account number. The customer's account number may be up to 30 characters in length.



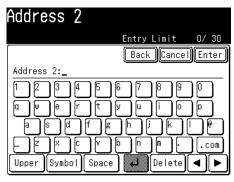
- 18. Press [Enter] to save the customer's name.
- 19. Select [Address 1].

Enter the customer's address for the upper row. The customer's address may be up to 30 characters in length.



- 20. Press [Enter] to save the customer's address for the upper row.
- 21. Select [Address2].

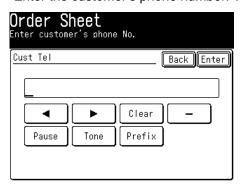
Enter the customer's address for the lower row. The customer's address may be up to 30 characters in length.



22. Press [Enter] to save the customer's address for the lower row.

#### 23. Select [Cust Tel].

Enter the customer's phone number. The phone number may be up to 20 characters in length.

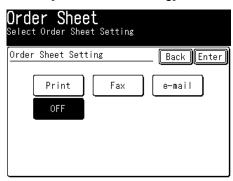


- 24. Press [Enter] to save the customer's phone number.
- 25. Select [Unit Serial #].

Enter the scanner's serial number. The number may be up to 18 characters in length.



- 26. Press [Enter] to save the scanner's serial number.
- 27. Select [Order Sheet Setting].



Determine if the machine prints, transmit or e-mail the consumable order sheet when the printer consumable is near end of its designed life.

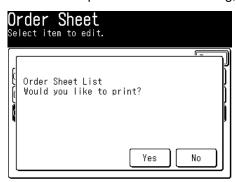
If [OFF] is selected, the machine does not print or transmit the consumable order sheet even though the printer consumable is near end of its designed life.

28. Press [Enter] to save the setting.

#### 3.16.2 Clear consumable order sheet

The consumable order sheet keeps several items, these are not clear the all RAM clear function (<Setting>, <\*>, <0>, <3>). To clear the information of consumable order sheet:

- 1. Press <Setting>, <\*>, <1>, <5>.
- 2. Select [Clear Order Sheet].
- 3. To clear the information of consumable order sheet, press [Yes]. To finish the operation without clearing, press [No].



#### 3.16.3 Print consumable order sheet

To check the customer's information has been registered correctly, print the consumable order sheet.

- 1. Press <Setting>, <\*>, <1>, <5>.
- 2. Select [Order Sheet List].

## 3.17 DRAM Clear

**Note:** Perform a DRAM clear whenever a memory upgrade is installed to the unit or the DRAM is replaced.

1. Press <Setting>, <\*>, <1>, <6>.



2. Press [Yes]. The DRAM will be cleared.

Note: To finish the operation without performing initialization, press [No].

3. After clearing, turn the power OFF and ON.

## 3.18 Clear Life Monitor

The life monitor keeps a count of the pages scanned, printed, and transmitted, along with the drum replacement count and total pages printed on the current drum. This mode clears these counters.

1. Press <Setting>, <\*>, <1>, <7>.



2. Press [Yes]. The counters will be reset.

Note: To finish the operation without performing initialization, press [No].

# 3.19 Clear Optional Data

This mode clears all data and all activity journals for Printer controller and second phone line.

1. Press <Setting>, <\*>, <1>, <8>.



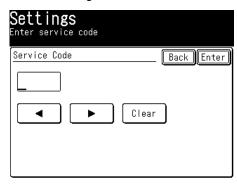
2. Press [Yes]. The optional data will be reset.

Note: To finish the operation without performing initialization, press [No].

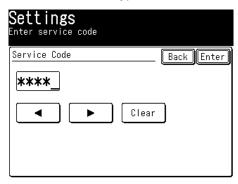
# 3.20 Set Service Code

This is the code to protect the life monitor clear operation. If it is not necessary to protect to the life monitor clear operation, abort this operation without entering the service code.

1. Press <Setting>, <\*>, <1>, <9>.



- 2. Your next mode depends on whether you're creating or modifying the service code:
  - If creating Use the numeric keypad to enter 0000 and press [Enter].
  - If modifying Use the numeric keypad to enter the proper service code and press [Enter]. If you enter an invalid code, the fax will reject the attempt and abort this operation.
- 3. Use the numeric keypad to enter the four-digit service code.



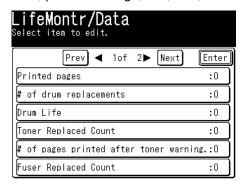
4. Press [Enter].

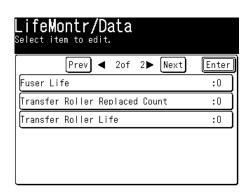
**Note:** To turn off the service code and return to normal life monitor clear (not protected), change the code to 0000 by repeating steps 1-4 and entering 0000 in step 3.

# 3.21 Life monitor maintenance

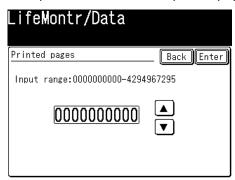
When you replace the main control PCB, you should register the previous several counter values of the life monitor.

- 1. Before updating the software or replacing the main control PCB, write down the counter values of the life monitor.
- 2. To confirm the life monitor, press <Setting>, <\*>, <0>, <9>, [Enter]. Then press [Life Monitor] and [Detail]. (See "3.11.1 Life Monitor," page 3-111.)
- 3. After you write down the counter values of the life monitor, update the software or replace the main control PCB.
- 4. Then, press <Setting>, <\*>, <2>, <0>.

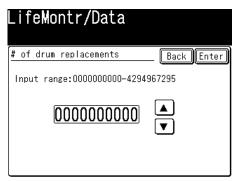




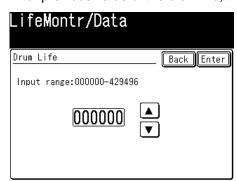
5. Enter previous values of the printed pages, then press [Enter].



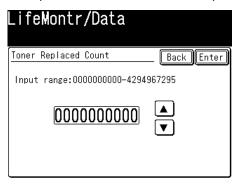
6. Enter previous value of the drum replaced count, then press [Enter].



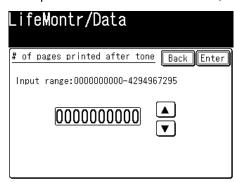
7. Enter previous value of the drum life, then press [Enter].



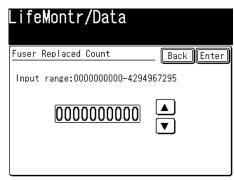
8. Enter previous value of the toner replaced count, then press [Enter].



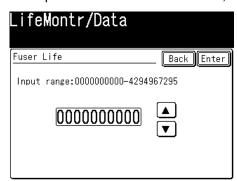
9. Enter previous value of the toner life, then press [Enter].



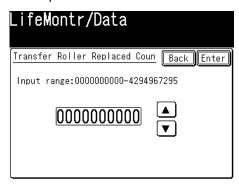
10. Enter previous value of the fuser replaced count, then press [Enter].



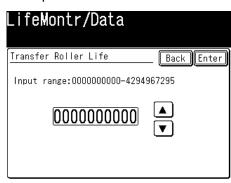
11 Enter previous value of the fuser life, then press [Enter].



12. Enter previous value of the transfer roller replaced count, then press [Enter].



13 Enter previous value of the transfer roller life, then press [Enter].

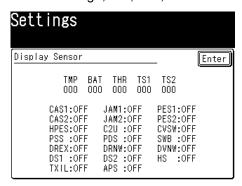


14. Press [Enter] to return to the standby mode.

# 3.22 Sensor input test

This mode can confirm the sensor status. When the sensor operates, the value next to sensor name changes 0 to 1. For example, when open the 1st paper cassette, the CAS1:OFF change to CAS1:ON.

1. Press <Setting>, <\*>, <2>, <2>.



Code	Sensor name	Status	Code	Name	Status
CAS1	OPEN1	OFF:1st cassette is close ON:1st cassette is open	DREX		OFF: No drum ON: Detect drum
JAM1	JAMC1	OFF: 1st side cover is close ON: 1st side cover is open	DRNW		OFF: Drum used ON: Drum new
PES1	PES	OFF: Detect paper in 1st cassette ON: No paper in 1st cassette	DVNW		OFF: Developing unit used ON: Developing unit new
CAS2	OPEN2	OFF:2nd cassette is close ON:2nd cassette is open	DS1	DS1	OFF: No document ON: Document existing
JAM2	JAMC2	OFF: 2nd side cover is close ON: 2nd side cover is open	DS2	DS2	OFF: No document ON: Document existing
PES2	PES2	OFF: Detect paper in 2nd cassette ON: No paper in 2nd cassette	HS	Home Sensor	OFF: Mirror outer than HS ON: Mirror inner than HS
HPES	TRAYS	OFF: Detect paper in bypass tray ON: No paper in bypass tray	TXIL	TXIL	OFF: Scanner cover is closed ON: Scanner cover is open
C2U		OFF: No 2nd cassette ON: 2nd cassette is attached	APS		OFF: Platen cover is open ON: Platen cover is closed
CVSW		OFF: Front cover is close ON: Front cover is open	TEMP		Show the internal temperature of machine.
PSS	PSS	OFF: No paper ON: Detect paper	BAT		Show the voltage of the SDRAM backup battery.
PDS	PDS	OFF: No paper ON: Detect paper jam	THR		Show the temperature of Heater roller.
SWB	DPS	Not working	TS1		Show the remaining toner level.
			TS2		Show the remaining toner level.

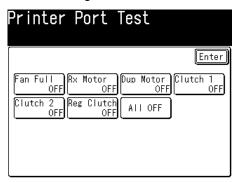
2. Press [Enter] to return to standby mode.

Note: CAS2, JAM2 and PES2 do not change, when there is no second cassette attached.

# 3.23 Printer diagnostic mode

This mode can confirm the operation of each parts of the printer section.

1. Press <Setting>, <\*>, <2>, <3>.



2. Select the device you want to set to ON.

Fan Full :Turn the fan motor with full power

Rx Motor :Turn the Rx motor

Dup Motor: Turn the Duplex motor

Clutch 1 :Turn the clutch of 1st cassette
Clutch 2 :Turn the clutch of 2nd cassette

Reg Clutch:Turn the Regist clutch
ALL OFF :Turn the all device to off

3. Press <Reset> to exit.

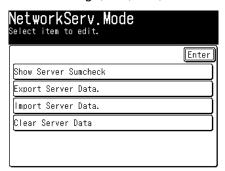
# 3.24 Network service mode

This mode provides the following four items:

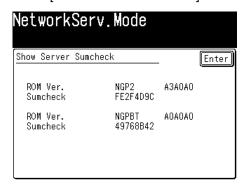
- Display the sum-check of network ROM and network boot ROM
- Export the network setting
- Import the network setting
- All clear the registered parameters of the network board

## 3.24.1 Display the server sum-check

1. Press <Setting>, <\*>, <2>, <4>.



2. Select [Show Server Sumcheck].



3. Press <Reset> to return to standby mode.

# 3.24.2 Export / Import the network setting

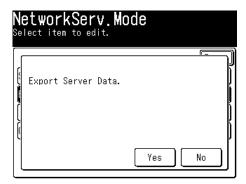
The network setting will be exported or imported using this mode.

When the NGP board or the compact flash memory card on the NGP board need to be replaced, use the "Export Server Data" mode to backup the setting on a compact flash memory card. After the NGP board or the card has been replaced, use "Import Server Data" mode to restore them on the new device.

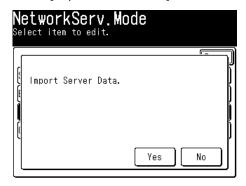
**Note:** The exported data will be saved as a file named "backupRAM.dat". If there is already a file with the same name, the file will be overwritten.

**Note:** The "Import Server Data" will take effect when it is imported and the machine is rebooted. Be sure to reboot the machine soon after the data is imported. Or all the registered data on the machine will be overwritten and go back to the point when the backup data was create, when the machine is rebooted on other occasion.

- 1. Press <Setting>, <\*>, <2>, <4>.
- 2. Select [Export Server Data].
- 3. Press [Yes].



- 4. The "ServerData.dat" will be created on the compact flash memory card.
- When replacing the NGP PCB, attach the card to the new NGP PCB.When replacing the card, use a card reader/writer and copy the data on the new card.
- 6. Press <Setting>, <\*>, <2>, <4>.
- 7. Select [Import Server Data].



- 8. Press [Yes].
- 9. The data will be imported on the machine.
- 10. Reboot the machine to be the settings in effect.

## 3.24.3 All clear the registered parameters of the network board

You can clear all the data of network settings like IP address, Subnet Mask or Default Gateway.

- 1. Press <Setting>, <\*>, <2>, <4>.
- 2. Select [Clear Server Data].



3. Press [Yes]. The information will be cleared.

Note: To finish the operation without performing initialization, press [No].

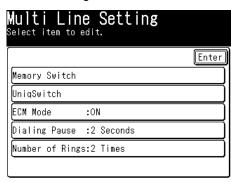
# 3.25 Multi Line Settings

This setting makes it possible to set the following menu for the optional second line:

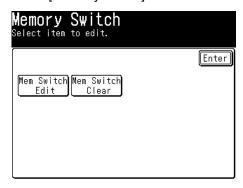
- Memory Switches
- Unique Switches
- ECM mode
- Dialing Pause
- · Number of Rings

Note: To set the second line, it is necessary that the Unique Switch 096 bit 6 is set to "On (1)" in advance.

1. Press <Setting>, <\*>, <2>, <8>.

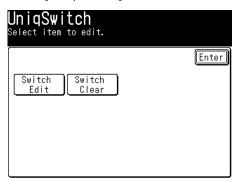


2. Select [Memory switch].



See "3.3 Memory Switch Adjustment" from page 3-49 if necessary. You will see a "O" mark on the list for switches available to set respectively for the second phone line.

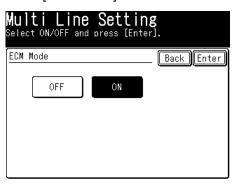
- 3. Press [Enter] to save the setting.
- 4. Select [Uniq Switch].



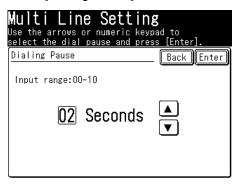
See "3.7 Unique Switch Adjustment" from page 3-79, if necessary. You will see a "O" mark on the list for switches available to set respectively for the second phone line.

5. Press [Enter] to save the setting.

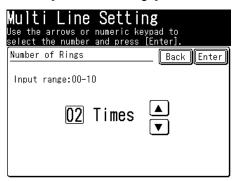
6. Select [EMC Mode].



- 7. Select the ECM mode for the second line.
- 8. Press [Enter] to save the setting.
- 9. Select [Dialing Pause].



- 10. Enter the dialing pause for the second phone line using the cursor key or the numeric keypad.
- 11. Press [Enter] to save the setting.
- 12. Select [Number of Rings].

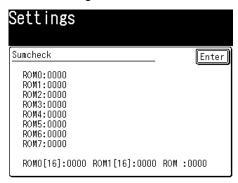


- 13. Enter the number of rings for the second phone line using the cursor key or the numeric keypad.
- 14. Press [Enter] to save the setting.
- 15. Press <Reset> to go back to the stand by mode.

# 3.26 Flash Rom Sum Check

This mode allows you to check Sum after the Flash ROM version is updated.

1. Press <Setting>, <\*>, <2>, <9>.



2. Press [Enter] to return to standby mode.

# 3.27 Printer registration adjustment

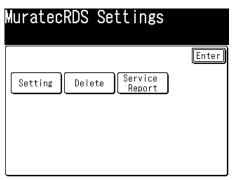
This mode can adjust the print registration for each paper source. For more detail, see "5.3 Adjustment" in section5.

# 3.28 Service Report

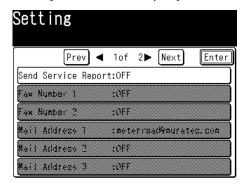
## 3.28.1 Set the service report

If using this feature, you should be enter following items:

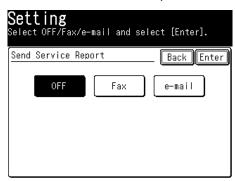
- Send
   Select whether to send the service report via fax or via e-mail.
- Report Where to send the service report. On "Fax Number 1" and "Mail Address 1" are the muratec customer service locations entered as default.
- Report format Select between simple report or detailed report. (See page 3-148 for details
  of each format)
- Period The report can be send either once in a determined month(s) or once in a month on a determined date and time.
- 1. Press <Setting>, <\*>, <4>, <2>.



- 2. Press [Setting].
- 3. Select [Send Service Report].



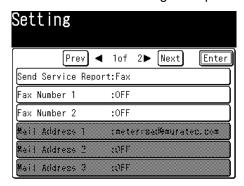
4. To activate the Service Report mode, select [Fax] or [e-mail].



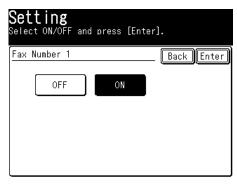
5. Press [Enter].

If you have selected [Fax], proceed to step 6. If you have selected [e-mail], skip to step 15.

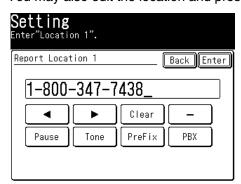
6. Enter the detail for sending the report via fax. Press [Fax Number 1].



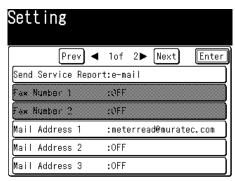
7. Press [On].



- 8. Press [Enter].
- 9. To send the service report to the Muratec customer service, press [Enter]. You may also edit the location and press [Enter].



- 10. To send the service report to another location, press [Fax Number 2]. Otherwise, skip to step 21.
- 11. Press [On].
- 12. Press [Enter].
- 13. Enter the fax number of the location using the numeric keypad.
- 14. Press [Enter] to save the setting. Now, skip to step 21.
- 15. Enter the detail for sending the report via e-mail. Press [Mail Address 1].



16. To send the service report to the Muratec customer service, press [Enter].

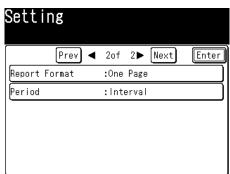
You may also edit the location and press [Enter].



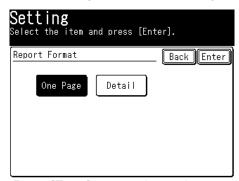
- 17. To send the service report to another location, press [Mail Address 2]. Otherwise, skip to step 21.
- 18. Enter the e-mail address of the location using the numeric keypad.



- 19. Press [Enter] to save the setting.
- 20. To enter one more location, press [Mail Address 3], and repeat steps 18 and 19.
- 21. Go to the next display and press [Report Format].



22. Select the report format between [One Page] and a [Detail].

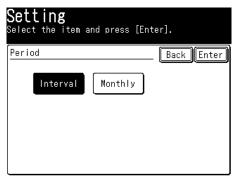


- 23. Press [Enter] to save the setting.
- 24. Select [Period].
- 25. Select between [Interval] and [Monthly] and press [Enter].

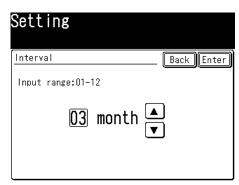
To send the report at some definite interval, select [Interval].

To send the report on a designated time once a month, select [Monthly].

- When you select [Interval], proceed to step 26-1.
- When you select [Monthly], proceed to step 26-2.

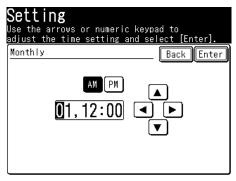


26-1. You can set the interval for service report auto transmission from 1 to 12 months.



The default setting is 3 months. Enter the desired number (01 to 12) using the cursor key or the numeric keypad, and press [Enter].

26-2. Enter the day and time in 24-hour format when to send the report, and press [Enter].



For instance, to send the report every 5th day of the month at 2 pm, press, 0, 5, 0, 2, 0, 0.

27. Press <Reset> to go back to the stand by mode.

## 3.28.2 Clear service report

To clear the information of service report:

- 1. Press <Setting>, <\*>, <4>, <2>.
- 2. Press [Delete].

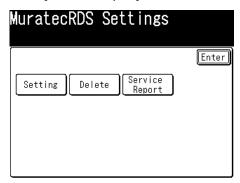


3. To clear the information of service report setting, press [Yes]. To finish the operation without clearing, press [No].

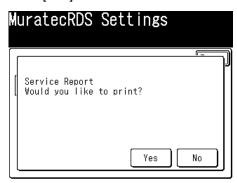
## 3.28.3 Print out the service report

If set, the print out of the report is available:

- 1. Press <Setting>, <\*>, <4>, <2>.
- 2. Press [Service Report].



3. Press [Yes].



According to the setting, either the simple report or the full report will be printed.

### The contents of the service report

Header:

#### \*\* Service report \*\*

Memory: 40MB

Line	Item	Detail
1	Name	The registered TTI or the "Customer's name" registered at Consumable Order Sheet
	Date	Current date
2	Serial No	The serial number registered at Consumable Order Sheet
	Cut Tel	The telephone number registered at Consumable Order Sheet
3	Installation Date	The date the machine was installed (The date set at User install)
	Days Used / Work Days	Days since the machine is installed / Days the machine has worked
4 and 5	ROM Version	The ROM version of Main ROM, PCL ROM, NGP board ROM and NGP panel ROM
6	Memory	The memory amount

The header is common for simple report and detailed report.

### Simple report

Note: Some device may not be available on this machine.

Paper Cassette Status	В	D /E	1 (0) 14	u. D. /E		o) u u	
PresentSetting Bypass [Paper Out ] 1ST [Letter   2ND [Not available] 3RD [Not available] 4TH [Not available] LCC [Not available] Duplex [Paper Out ] Grand Total PageCount	Print [	Pages (Eve 0] [ 0] [ 0] [ 0] [ 0] [ 0] [ 0] [ 0] [	ry I/C)JA 0] [ 0] [ 0] [ 0] [ 0] [ 0] [ 0] [ 0] [	M Pages(E 0][ 0][ 0][ 0][ 0][ 0][ 0][	very 17 0] 0] 0] 0] 0] 0]	C) Media [Plain	]
Printer Jam Info Print end. [ 1st Cassette [ 3rd Cassette [ Multi-paper Tray [ Transport Unit [ Fuser Unit [ LCC Transfer [ SHIFT/2BINTransfer[		0] 0] 0] 0] 0] 0]	LCC Cas	sette Unit e Unit Switchbac	[		0] 0] 0] 0] 0]
Scan Pages/Rate	0] 0] 0] 0]	FBS [ [ [	0]/[ 0]/[ 0]/[ 0]/[	0] 0] 0]	RADF [ [ [	0]/[ 0]/[ 0]/[ 0]/[	0] 0] 0] 0]
# of Scanner Jam DS2(OFF) -> DS2(ON) DS2(ON) -> DS2(OFF)	[		0] 0]				
Communication Info G3  Tx Times [ 0]  Rx Times [ 0]  Tx Pages [ 0]  Rx Pages [ 0]	nner Tx [ [ [		0] [0 [0] [0 [0] [0 [0] [0		Tx Rate 0] 0] 0] 0]	]	0]

### Paper Cassette Status:

Paper Supply Device: The device names that supply paper.

Items	Detail
Present setting	Whether the device is available or not, if available the supplied paper size or "Paper out" is printed.
Print Pages (Every I/C)	The printed pages per device. The value in the parenthesis shows the pages printed with the current drum. (I/C = Imaging Cartridge)
JAM Pages (Every I/C)	The jammed pages per device. The value in the parenthesis shows the pages printed with the current drum. (I/C = Imaging Cartridge)
Media	The media supplied to the device.

Printer Jam Info: The information of pages printed normally and jammed per paper supply devices.

### Scan Pages / Rate:

Items	Detail
Сору	The numbers or documents copied and copied times, per ADF, FBS or RADF.
Fax	The numbers or documents transmitted and transmitted times, per ADF, FBS or RADF.
Scanner	The numbers or documents scanned in scanner mode and scanned times, per ADF, FBS or RADF.
Sub Total	The total of copy, fax and scan function.
Total	The total of all scanned documents.
PageCount	The total pages counted according to the counter setting. (If the documents are legal-sized, the machine will count 5 pages for every 4 sheets.)

# of Scanner Jam: The total number of document jam in each location

### Communication Info:

Items	Detail
Scanner Tx Times	The number of times for memory transmission.
Memory Tx Rate	The number of times for memory transmission.
Tx Times	The total time of transmission per G3, ECM and Super G3.
Rx Times	The total time of reception per G3, ECM and Super G3.
Tx Pages	The total pages of transmission per G3, ECM and Super G3.
Rx Pages	The total pages of reception per G3, ECM and Super G3.

### First page of the detailed report

Note: Some device may not be available on this machine.

Paper Cassette Status PresentSetting	: Print	Pages (Ev	ery I/(	) JAM	Pages (Every	1/0	) Media		
Paper Supply Device Bypass [Paper Out 1ST [Letter 2ND [Not available 3RD [Not available 4TH [Not available LCC [Not available Duplex [Paper Out PaperRelease Device		90] [ 651] [ 0] [ 0] [ 0] [ 2] [	90] 651] 0] 0] 0] 0] 2]	[	0][ 0][ 0][ 0][ 0][ 0][	0] 0] 0] 0] 0] 0]	[Plain		]
Duplex [Available 2BIN [Available	] [	] [0 ] [0	0] 0]	[	] [0 ] [0	0] 0]			
Printer Jam Info Print end. [ 1st Cassette [ 3rd Cassette [ Multi-paper Tray [ Transport Unit [ Fuser Unit [ LCC Transfer [ SHIFT/2BINTransfer[		0] 0] 0] 0] 0] 0]	4TH Dup 1 Sepa Dup 1 LCC	Casse	tte [ it [ Unit [ itchback [			0] 0] 0] 0] 0] 0]	
# of pages printed aft # of pages printed aft # of pages printed aft Toner Replaced Count Drum Rotation Time # of drum replacements Drum Life Time	er tone						[ [ [ [	0] 0] 0] 0] 0]	
Custom Size(3type)	[216	x279] [216	5x279] [2	216x27	9]				
Order Sheet Setting Dealer Service Report		OFF OFF							

### Paper Cassette Status:

Paper Supply Device: The device names that supply paper. Paper Release Device: The device names that stack paper.

Items	Detail
Present setting	Whether the device is available or not, if available the supplied paper size or
	"Paper out" is printed.
Print Pages (Every I/C)	The printed pages per device. The value in the parenthesis shows the pag-
	es printed with the current drum. (I/C = Imaging Cartridge)
JAM Pages (Every I/C)	The jammed pages per device. The value in the parenthesis shows the
	pages printed with the current drum. (I/C = Imaging Cartridge)
Media	The media supplied to the device.

Printer Jam Info: The information of pages printed normally and jammed per paper supply devices.

### Life Counter:

Items	Detail
# of pages printed after replacing toner	The number of printed pages that are printed using the pres-
	ent toner cartridge.
# of pages printer after toner warning	The number of printed pages after "The toner is low" warning
	is displayed.
Toner Replaced Count	The number of times toner cartridge is replaced.
Drum Rotation Time	The number of times drum cartridge is replaced.
# of drum replacement	The number of drum cartridge replaced times.
Drum Life Time	The drum cartridge rotating seconds.
Custom Size (3 type)	The registered custom size paper.
Order Sheet Setting	The setting of consumable order sheet (Off, Print, Fax, e-mail).
Dealer Service Report	The setting of service report (Off, Fax, e-mail).

#### Second page of the detailed report

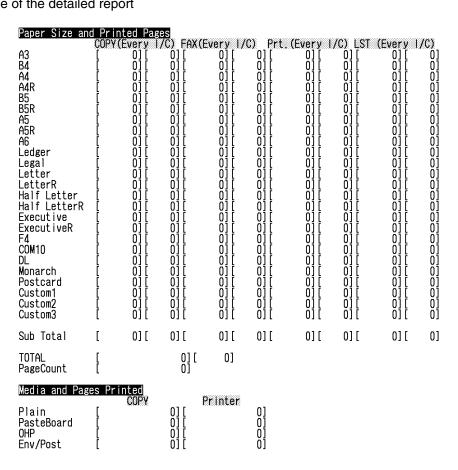
```
A:0x00000000 C:0x00000000 T:Jan 1 1992 12:00am
         A:0x00000000
                                      C:0x00000000 T:Jan 1 1992 12:00am
  IO: A:0x00000000
                                       C:0x00000000 T:Jan 1 1992 12:00am
         A:0x00000000
                                       C:0x00000000 T:Jan 1 1992 12:00am
  12:
         A:0x00000000 C:0x00000000 T:Jan 1 1992 12:00am
 System History
Scanner Jam
01: C:00
02: C:00
03: C:00
04: C:00
05: C:00
06: C:00
07: C:00
08: C:00
09: C:00
10: C:00
Printer Jam
01: C:00
02: C:00
03: C:00
04: C:00
05: C:00
06: C:00
06: C:00
06: C:00
07: C:00
08: C:00
                                                                                                         1992 12:00am
                                                                                       T:Jan
T:Jan
<u>T</u>:Jan
                                                                                       T:Jan
T:Jan
                                                                                       T:Jan
                                                                                       T:Jan
                                                                                       T:Jan
                                                                                       T:Jan
                                                                                       T:Jan
                                                                                                      1 1992 12:00am
                                                                                                     1 1992 12:00am
1 1992 12:00am
1 1992 12:00am
1 1992 12:00am
1 1992 12:00am
1 1992 12:00am
1 1992 12:00am
1 1992 12:00am
1 1992 12:00am
1 1992 12:00am
                                                                                       T:Jan
T:Jan
T:Jan
                                                                                       T:Jan
                                                                                       T:Jan
                                                                                       T:Jan
                                                                                       T:Jan
T:Jan
                                                                                       T:Jan
T:Jan
10: C:00
Service Call
01: C:00
02: C:00
03: C:00
05: C:00
06: C:00
07: C:00
08: C:00
09: C:00
                                                                                                        1992 12:00am
                                                                                       T:Jan
                                                                                       T:Jan
                                                                                       T:Jan
                                                                                       T:Jan
                                                                                      T:Jan
T:Jan
T:Jan
T:Jan
T:Jan
                                                                                       T:Jan
T:Jan
                                                                                                      1 1992 12:00am
```

System Inside Information: Not used for field service.

System History: The latest 10 details, date and time of the following errors

- Scanner jam
- Printer jam
- Service Call error

#### Third page of the detailed report



#### Paper Size and Printed pages:

Note: Some paper size may not be available on this machine.

Items	Detail
Paper size	The paper used for printing
Copy (Every I/C)	The number of pages used for copy. The value in the parenthesis shows the pages using the current drum. (I/C = Imaging Cartridge)
Fax (Every I/C)	The number of pages used for fax printing. The value in the parenthesis shows the pages using the current drum. (I/C = Imaging Cartridge)
Pri. (Every I/C)	The number of pages used for PC printing. The value in the parenthesis shows the pages using the current drum. (I/C = Imaging Cartridge)
LST. (Every I/C)	The number of pages used to print lists. The value in the parenthesis shows the pages using the current drum. (I/C = Imaging Cartridge)
Sub Total	The total of copy, fax and scan used pages.
TOTAL	The total of all printed pages.
PageCount	The total pages counted according to the counter setting. (If the documents are legal-sized, the machine will count 5 pages for every 4 sheets.)

#### Media and Pages Printed:

Items	Detail
	The medial (plane paper, Paste board, OHP transparency, Envelopes / Postcards) for copying and printing.
Сору	The number of pages used for copy.
Printer	The number of pages used for PC printing.

# Fourth page of the detailed report

# of application copies EvenMag. [ Alt.Mag. [ Combine	0] 0] 0] 0] 0] 0] 0] 0]	Function Count Prog.One-Touch Speed TX Group Tx Macro Program Stamp Energy Save Push Review Key Push Fax Forwarding Delayed Tx Polling Batch Tx. F-CodePolling [ FCodePolling [	0] 0] 0] 0] 0] 0] 0] 0]
Max Number Scanner Pages [ Print Pages [ # of Copies [ Broadcast Tx # [ Rx File # [ ReservedCommand No[	0] 0] 0] 0] 0]	Registered Number # of Speed Dial [ # of F-Code [ # of Key Macro [ # of FaxFwrd. [ # of Batch Box [ # of Group Dial [	0] 0] 0] 0] 0]
IWAIN Relative ScanRate [ 600dpi [ 300dpi [ 100dpi [ Text [ Auto [ Photo [	0] 0] 0] 0] 0] 0]		

# of application copies: The number of times the copy functions are used.

**Note:** Some functions may not be available on this machine.

Items	Detail			
Even Mag.	Even magnification (100%) copy			
Alt. Mag.	Alternative magnification (enlarged or reduction) copy			
Combine	Combine copy (n-in-1)			
Repeat	Repeat copy			
Series Copy	Series copy			
Shadow Clear	Copy with boarder or center erased			
Margin	Copy with binding margin attached			
XY Zoom	Directional magnification copy			
Nega / Posi	Copy with black and white area reversed			
Last job	Copy the last job again			
TopUp Copy	TopUp copy			
Duplex	Duplex copy			
Booklet	Booklet copy			
Mix Length	Copy with mixed document size			
Fax &Copy	"Fax and copy" function			

Function Count: The number of times advanced fax functions or other functions are used.

Note: Some functions may not be available on this machine.

Items	Detail	
Prog. One-touch	Program one-touch function	
Speed Tx	Transmission using the Address Book	
Group Tx	Transmission using the Address Group	
Macro Program	Macro Program	
Stamp	Transmission using conformation stamp	
Energy save Push	<energy save=""> Key pressed count</energy>	
Review Key Push	<fax cancel="" confirm.="" job=""> Key pressed count</fax>	
Fax Forwarding	Fax Forwarding function	
Delayed Tx	Delayed transmission function	
Polling	Polling function	
Batch Tx	Batch transmission function	
F-Code Tx	F-Code transmission function	
FCodePolling	F-Code polling function	

Max Number: The maximum numbers used in each function.

Items	Detail		
Scanner Pages	The scanned pages		
Print Pages	PC printing pages		
# of Copies	Copied pages		
Broadcast Tx #	The numbers of location in broadcast transmission		
Rx File #	The numbers of out-of-paper reception		
Reserved Command No	The numbers		

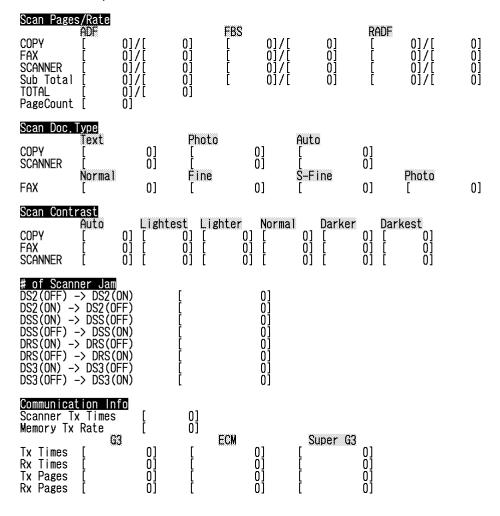
Registered Number: The numbers registered in each function.

Items	Detail
# of Speed Dial	The registered Address Book locations
# of F-Code	The registered F-code Boxes
# of Key Macro	The registered Macro keys
# of Fax Fwrd.	The registered Fax Forwarding conditions
# of Batch Box	The registered Batch Boxes
# of Group Dial	The registered Address Groups

TWAIN Relative: The number of times the scanner function is used.

Items	Detail
Scan Rate	The scanner used times
600 dpi	The scanner used times in 600 dpi resolution
300 dpi	The scanner used times in 300 dpi resolution
200 dpi	The scanner used times in 200 dpi resolution
100 dpi	The scanner used times in 100 dpi resolution
Text	The scanner used times in "Text" mode for document type
Auto	The scanner used times in "Auto" mode for document type
Photo	The scanner used times in "Photo" mode for document type

#### Fifth page of the detailed report



### Scan Pages / Rate:

Note: RADF is not available on this machine.

Items	Detail
Сору	The numbers or documents copied and copied times, per ADF, FBS or RADF.
Fax	The numbers or documents transmitted and transmitted times, per ADF, FBS or RADF.
Scanner	The numbers or documents scanned in scanner mode and scanned times, per ADF, FBS or RADF.
Sub Total	The total of copy, fax and scan function.
Total	The total of all scanned documents.
PageCount	The total pages counted according to the counter setting. (If the documents are legal-sized, the machine will count 5 pages for every 4 sheets.)

### Scan Doc. type:

Items	Detail		
Сору	The numbers or documents copied per text, Photo and Auto.		
Fax	The numbers or documents transmitted per normal, fine, Super fine and Photo.		
Scanner	The numbers or documents scanned per text, Photo and Auto.		

#### Scan contrast:

Items	Detail
Сору	The numbers or documents copied per contrast.
Fax	The numbers or documents transmitted per contrast.
Scanner	The numbers or documents scanned per contrast.

# of Scanner Jam: The total number of document jam in each location

### Communication Info:

Items	Detail
Scanner Tx Times	The number of times for memory transmission.
Memory Tx Rate	The number of times for memory transmission.
Tx Times	The total time of transmission per G3, ECM and Super G3.
Rx Times	The total time of reception per G3, ECM and Super G3.
Tx Pages	The total pages of transmission per G3, ECM and Super G3.
Rx Pages	The total pages of reception per G3, ECM and Super G3.

Sixth page of the detailed report

# of Errors	രാ	ECN	Sinor 63
T.1.1 [ T.1.2 [ T.1.3 [ T.1.5 [ T.2.1 [ T.2.2 T.2.3 [ T.2.10 T.2.11 [ T.2.12 [ T.2.13 [ T.2.14 [ T.2.15 [ T.2.15 [ T.2.15 [ T.3.1 [ T.4.2 [ T.4.3 [ T.4.4 1 T.5.2 1 T.7.10 [ T.7.11 [ T.8.1 2 T.7.11 [ T.8.2 [ T.7.3 [ T.7.3 [ T.7.11 [ T.8.3 [ T.8.3 [ T.8.8	63 0] 0] 0] 0] 0] 0] 0] 0] 0] 0] 0]	ECM [	Super G3 [ [

# or Errors: Number of errors in transmission per G3, ECM and Super G3.

Seventh page of the detailed report

R. 1.1.3.4.5.3.8.9.1.2.3.4.5.1.2.3.4.5.1.2.2.2.2.1.1.5.3.8.8.8.8.8.8.8.8.8.8.8.8.8.8.8.8.8.8	G3 0] 0] 0] 0] 0] 0] 0] 0] 0] 0] 0] 0] 0]		0] 0] 0] 0] 0] 0] 0] 0] 0] 0] 0] 0]	Super G3 [ 00 [ 00 [ 00 [ 00 [ 00 [ 00 [ 00 [ 0
--	---	--	--	---

# or Errors: Number of errors in reception and dialing per G3, ECM and Super G3.

# 3.29 Quick Initial settings

At installation, you should set some parameters according to the following procedures.

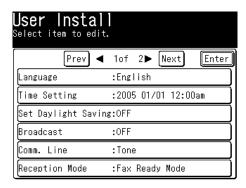
You can do the following setting continuously by using this mode.

- 1. Initial settings
- 2. Consumable order sheet settings
- 3. Service Report settings

**Note:** Before starting the installation settings, clear the memory by pressing <Setting>, <\*>, <0>, <2>, [Enter].

### **Initial setup**

1-1. To start Initial setting mode, press <Setting>, <\*>, <9>, <9>. The LCD shows:



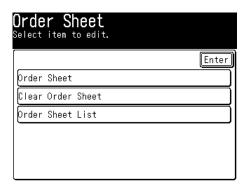
1-2. Enter the items following the LCD.

See "Initial setup" in the MFP User's Guide for detailed instructions.

1-3. After you have entered all the items, press [Enter].

### Consumable order sheet settings

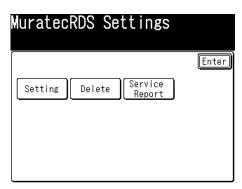
2-1. The LCD now shows the consumable order sheet setting menu.



- 2-2. Set, clear or print the consumable order sheet. See "3.16 Consumable order sheet" on page 3-126 for detailed instructions.
- 2-3. After you have entered all the items, press [Enter].

## **Service report settings**

3-1. The LCD now shows the service report setting menu.



- 3-2. Set or clear the service report. See "3.28 Service report" on page 3-144 for detailed instructions.
- 3-3. After you have entered all the items, press [Enter].

# 3.30 Update the software via Network

To update the software for machine or PCL via network, you should follow the following steps:

- 1. Set up the network (See "3.31.6 Firmware Update Settings" how to set.)
- 2. Update the software via Network

The update is either through choosing the update version manually (manual update) or specifying the latest version (latest version update).

Note: In the following conditions, update is not possible

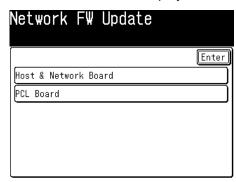
- While the scanner is in use
- While printer is in use
- While transmitting
- While the machine memory is in use
- When the DRAM battery is not charged

## 3.30.1 Latest version update

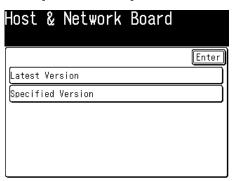
Note: Set up the network prior to update. (See "3.31.6 Firmware Update Settings" how to set.)

- 1. Press <Setting>, <\*>, <9>, <0>.
- 2. Select either [Host & Network Board] or [PCL Board].

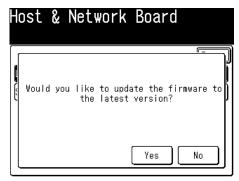
  This screen will not be displayed if the PCL board is not attached. In such case, skip to step 3.



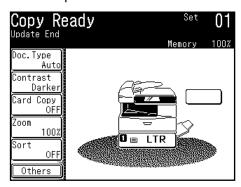
3. Select [Latest Version].



4. Press [Yes].



5. When the date is copied, machine reboots from itself and the updating begins. DO NOT turn the power off, until the update is finished.

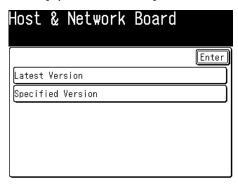


## 3.30.2 Manual update

Note: Set up the network prior to update. (See "3.32.6 Firmware Update Settings" how to set.)

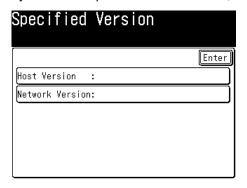
- 1. Press <Setting>, <\*>, <9>, <0>.
- 2. Select either [Host & Network Board] or [PCL Board].

  This screen will not be displayed if the PCL board is not attached. In such case, skip to step 3.
- 3. Select [Specified Version].



4. Select [Host Version] .

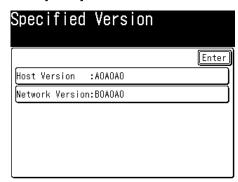
If you will not update the host version, skip to step 6.



5. Enter your desired ROM version for the machine, and press [Enter].



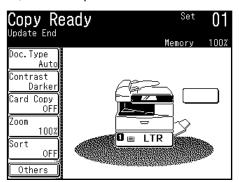
- 6. Select [Network Version].
- 7. Enter your desired ROM version for the network board, and press [Enter].
- 8. Press [Enter].



9. Confirm the ROM versions, and press [Yes].



10. When the date is copied, machine reboots from itself and the updating begins. **DO NOT** turn the power off, until the update is finished.



# 3.31 Update the software

To update the software using your PC, you should follow the following steps:

- 1. Install the update application on your PC
- 2. Install the USB driver on your PC
- 3. Update the software using the PC

The installation is only necessary for the fist time.

In this manual, the details are described with Windows XP. The screen image may differ according to the Windows version of the PC.

- · Windows 98
- · Windows 2000
- · Windows XP

are available for the updating application.

Note: In the following conditions, update is not possible

- While the scanner is in use
- While printer is in use
- While transmitting
- While the machine memory is in use

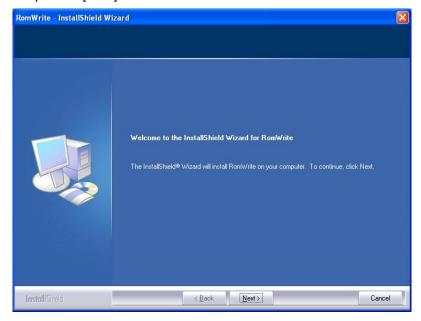
## 3.31.1 Install the update application on PC

To update the software, first install the USB RomWrite application on your PC.

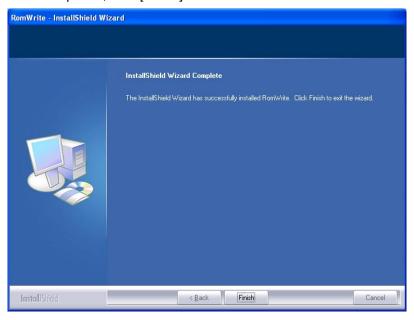
1. Double click the RomWriteSetup.exe icon and start up the Installer Program.



2. Install Shield comes up. Click [Next].



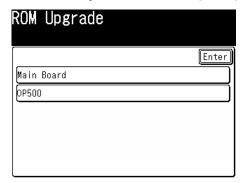
3. When the installation is completed, click [Finish].



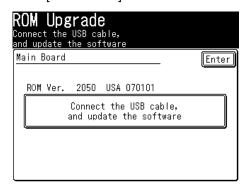
# 3.31.2 Installing the USB driver on the PC

Install the USB driver to connect the machine and the PC

1. Press <Setting>, <\*>, <9>, <8>, [Enter].



2. Press [Main Board].



3. Plug the USB cable with the machine and the PC.

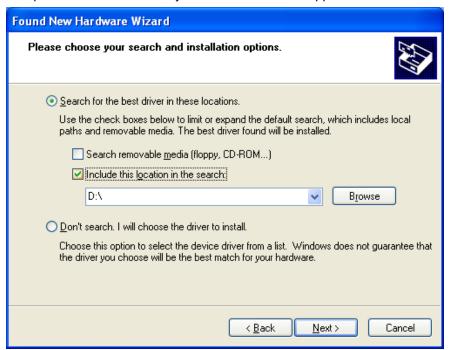
When the PC is Windows 98/2000/XP, it detects a new hardware and the following wizard opens. Click [Next].

4. Select [Install from a list or specific location (Advanced)].



5. Click [Browse] and select the folder where the USB driver for RomWrite is installed.

Note: The driver is placed on the PC when you have installed the application on the PC.



6. Click [OK].



7. Click [Next]. The driver will be installed on the PC.



8. Click [Finish] and finish the "Found New Hardware Wizard".



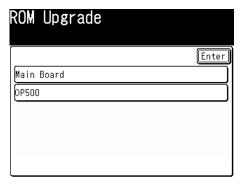
## 3.31.3 Updating the software using the PC

**Important:** You cannot update the software in following situations:

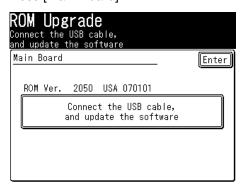
- · The machine is in transmission
- · The machine is in scanning or in printing
- · Data are stored in memory

In that case, wait until the transmission, scanning or printing ends, or the stored data is transmitted, deleted or whatever and update the software.

1. Press <Setting>, <\*>, <9>, <8>, [Enter].

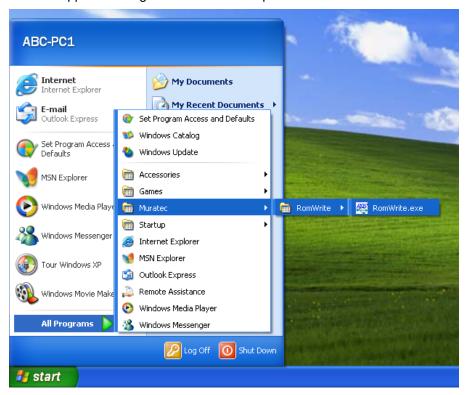


2. Press [Main Board].

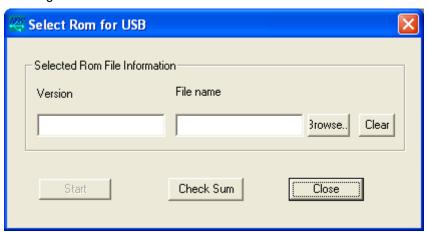


- 3. Connect your PC and the machine with USB cable.
- 4. Click [Start] on the PC screen.

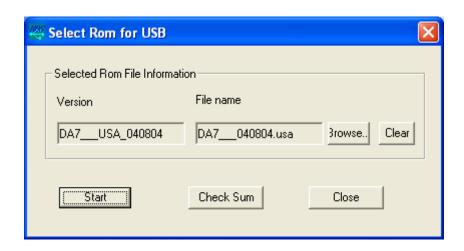
5. Launch the RomWrite application registered in the Startup menu.



6. Click [Browse] and designate the ROM data file.



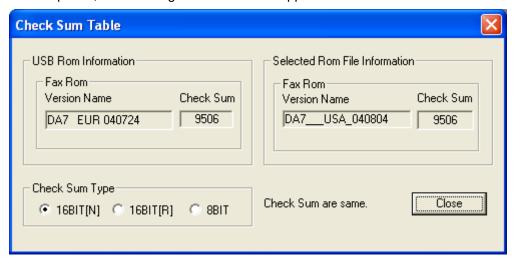
7. Click [Start].



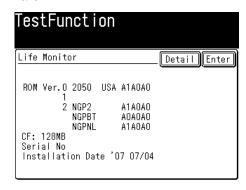
The ROM Writer erases the current program in the fax machine, and then writes the new program to the machine



When the job is completed, the following check-sum table appears.



- 8. Disconnect your PC from the machine.
- 9. The machine goes to the Start up screen and the ROM update program starts. While the machine is updating its ROM, the Energy Save lamp flashes. When the ROM update is completed, the machine reboots.
- 10. Press <Setting>, <\*>, <0>, <9>, then select [Life Monitor] to confirm that the machine has the latest software.



Note: The number differs according to the software version.

### 3.31.4 Error code

If the error occurred during writing, the following error code will be appeared:

E.02: Maker code read error

E.04: Sector erase error

E.05: Writing error

E.06: Sum check error

E.07: Time out error

When the above error occurred, turn off the power switch, confirm the cable connection, and then perform from step 1 again.

## 3.32 Network Service functions (IP Address: 8000)

The following topics will be covered in this section:

Starting the service functions

Downloading the received faxes

Firmware Update

Modifying the session timer

Changing the OfficeBridge Notification Status to InfoMonitor

OfficeBridge IFAX detailed status

Firmware Update settings

**Dial Option Conversion settings** 

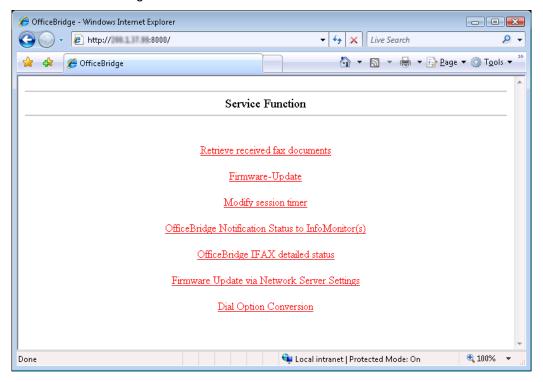
### To open the network service screen,

- 1. Start the web browser on a network computer.
- 2. Type the machine's IP address in the URL address field followed by ":8000" (colon eight thousand). e.g. http://192.168.1.10:8000
- 3. When the window opens enter the following name and password and click [OK].

User name: muratec Password: service



4. Now the network service settings are available.

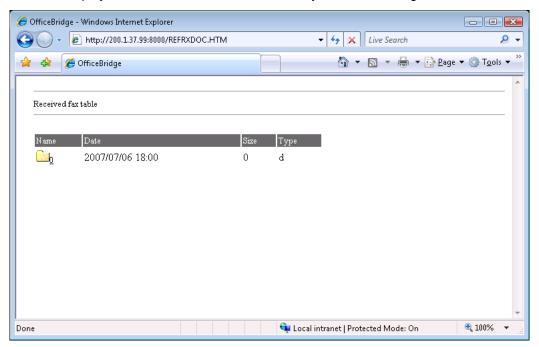


### 3.32.1 Downloading the received faxes

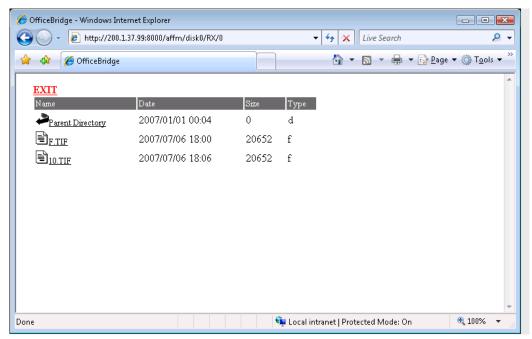
When the received faxes are stored in image data format on the OfficeBirdge memory, you can retrieve them using this mode.

The files are contained in folders: One folder contains 100 files. The file names are displayed with hexadecimal numbers.

- 1. Open the network service screen. (see page 3-174)
- 2. Click "Retrieve received fax documents".
- 3. The folders will be displayed. Click the folder which contains your desired image data.



4. Follow the instructions on the screen to download or display the image data.



### 3.32.2 Firmware Update

- 1. Open the network service screen. (see page 3-174)
- 2. Click "Firmware-Update".
- 3. Click [Browse] to browse the location where the firmware file is located.
- 4. Click [Open].

#### **IMPORTANT**

The fax machine will reboot one time on its own to complete the upgrade. **DO NOT** turn the fax machine off during this process.

5. Once the process has completed, confirm that the unit has been upgraded by going back to the original IP address used in step 2 and view the current software revision.

### 3.32.3 Modifying the session timer

Modify the session time between the machine and the OfficeBridge users here. The factory default is 30 minutes.

When there is no communication between the machine and the OfficeBridge user during the set time, the user will forcibly be log out.

Then time can be set between 1 to 1440 minutes (24 hours), however the value will be changed to 10 when a value smaller than 10 is input.

- 1. Open the network service screen. (see page 3-174)
- 2. Click "Modify session timer".
- 3. Input the desired value and click [Ok].

### OfficeBridge Session Control Time

Imput the session timeout and press the SET button.



## 3.32.4 Changing the OfficeBridge Notification Status to InfoMonitor

This function stops the notification of events from OfficeBridge to InfoMonitor. It helps determining failure by stopping the unnecessary broadcast packet from the InfoMonitor temporarily, in case of network trouble.

**IMPORTANT:** When stopping the OfficeBridge notification, first shut down the InfoMonitor. Otherwise the access from the InfoMonitor to the OfficeBridge will restart the notification.

- 1. Open the network service screen. (see page 3-174)
- 2. Click "OfficeBridge Notification Status to InfoMonitor(s)".
- 3. Click [Stop].

### OfficeBridge Notification Status to InfoMonitor(s)

Notification to InfoMonitor(s) is available.

Please press the stop button when you stop the notification to InfoMonitor(s).

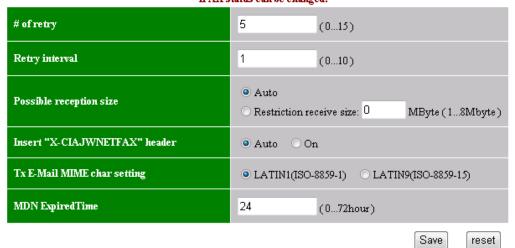
stop

## 3.32.5 OfficeBridge IFAX detailed status

- 1. Open the network service screen. (see page 3-174)
- 2. Click "OfficeBridge IFAX detailed status".

### OfficeBridge IFAX detailed status

### IFAX status can be changed.



Items	Instructions
# of retry	Set the number of times to retry sending the internet fax when a memory overflow occurred or a socket error occurred.
Retry interval	Set the retry interval sending the internet fax when a memory overflow occurred or a socket error occurred.
Possible reception size	To restrict the mail size, set it here. The available range is from 1 – 8 MB. When "Auto" is selected, the size will be distinguished from the image memory capacity of the Host and the capacity of SDRAM of the NGP board automatically.
Insert "X-CIAJWNETFAX" header	To add a X-CIAJWNETFAX header always, set this function to "On".
	This header is usually added only to IFAX that default body and message are edited, so that the other machine will not print the message.
	When this function is "On", the body and message will not be printed on the partner's IFAX machine even if the user has edited them. (Other companies IFAX may print them.)
Tx E-Mail MIME char setting	Select which code to use when transmitting characters other than ASCII code.
	Select "LATIN9(ISO-8859-15)" only when the user wants to use this code.
	When only ASCII code is used, the message is transmitted with US-ASCII regardless of this setup.
	Note: See the codes on the next page.
MDN Expired Time (This function is effective only with OB2 models)	Set the time which after that the MDN will be printed respectively. The available time is from 0 to 72 hours. When MDN is demanded in IFAX transmission for several addresses, MDN, which will be received within this set up time, will be printed together in one list.
	If the time is set up to 0, MDN will be printed every time when it is received.

# ISO-8859-15 (Latin9)

80 81 82 83 84 85 86 87 88 89 8A 8B 8C 8D 8E 8F 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 90 91 92 93 94 95 96 97 98 99 9A 9B 9C 9D 9E 9F 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 AO A1 A2 A3 A4 A5 A6 A7 A8 A9 AA AB AC AD AE AF 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 ; ¢ £ € ¥ Š § š © a « ¬ BO B1 B2 B3 B4 B5 B6 B7 B8 B9 BA BB BC BD BE BF 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191  $^{\circ}$   $\pm$   $^{2}$   $^{3}$   $\check{Z}$   $\mu$   $\P$   $^{\bullet}$   $\check{Z}$   $^{1}$   $^{\circ}$   $\gg$   $\times$   $\times$   $\times$   $\times$ CO C1 C2 C3 C4 C5 C6 C7 C8 C9 CA CB CC CD CE CF 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 À Á Â Ã Å Å Æ Ç È É Ê Ë ÌÍÎ DO D1 D2 D3 D4 D5 D6 D7 D8 D9 DA DB DC DD DE DF 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 ĐÑ Ò Ó Ô Ö X Ø Ù Ú Û Ý Þ EO E1 E2 E3 E4 E5 E6 E7 E8 E9 EA EB EC ED EE EF 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 à á â ã ä å æ ç è é ê ë ì î î ï FO F1 F2 F3 F4 F5 F6 F7 F8 F9 FA FB FC FD FE FF 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 ð ñ ò ó ô õ ö ÷ ø ù ú û ü ý þ

# ISO-8859-1 (Latin1)

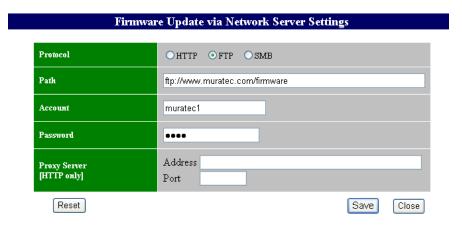
80 81 82 83 84 85 86 87 88 89 8A 8B 8C 8D 8E 8F 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 90 91 92 93 94 95 96 97 98 99 9A 9B 9C 9D 9E 9F 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 AO A1 A2 A3 A4 A5 A6 A7 A8 A9 AA AB AC AD AE AF 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 | § " © a ; ¢ £ ¤ BO B1 B2 B3 B4 B5 B6 B7 B8 B9 BA BB BC BD BE BF 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 <sup>3</sup> μ ¶ · , ¹ ° » CO C1 C2 C3 C4 C5 C6 C7 C8 C9 CA CB CC CD CE CF 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 ÅÆÇÈÉÊËÌ ÀÁÂ ÃÄ DO D1 D2 D3 D4 D5 D6 D7 D8 D9 DA DB DC DD DE DF 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 ØÙÚÛÜÝ ÑÒÓÔÕÖ × EO E1 E2 E3 E4 E5 E6 E7 E8 E9 EA EB EC ED EE EF 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 ã ả ả æ ç è é ê ë ì í àáâ FO F1 F2 F3 F4 F5 F6 F7 F8 F9 FA FB FC FD FE FF 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 ð ñ ò ó ô õ ö ÷ ø ù ú û ü ý þ

## 3.32.6 Firmware Update Settings

To update the machine via network, set the items first.

- 1. Open the network service screen. (see page 3-174)
- 2. Click "Firmware Update via Network Server Settings".
- 3. Enter the necessary information.

Note: MAI dealers have a default value entered.



See "3.29 Update the software via Network" how to update the machine using the network.

## 3.32.7 Convert dialling characters in e-mail gateway functions

The following dialling characters will be converted to certain characters specified here:

Pause (/P)

Tone (/T)

Flash (/F)

- 1. Open the network service screen. (see page 3-174)
- 2. Click "Dial Option Conversion".
- 3. Enter the characters to which the machine should convert the dialling character.



4. Click "Save" to save the setting.

#### Note:

- Up to two characters are able to enter for each dialling character.
- For available characters, see table below.
- If the box is blank, the dialling characters will be override when transmitting over the e-mail gateway.

	!	=	#	\$	%	&	,	(	)	*	+	,	•		/
0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
@	Α	В	С	D	Ε	F	G	Н	Ι	J	K	L	М	N	0
Р	Q	R	S	Т	U	٧	W	Х	Υ	Z	[	\	]	٨	_
6	а	b	С	d	е	f	g	h	i	j	k	Ι	m	n	0
р	q	r	s	t	u	ν	w	х	у	z	{	Ī	}	~	

# 4 Troubleshooting Procedures

## 4.1 Troubleshooting Outline

### Before troubleshooting a unit check the following:

- Is the power cord correctly connected to the machine?
- Are the telephone handset and the telephone line cord connected correctly?
- Is there paper in the paper cassette?
- Are all covers closed correctly?

# Before removing any portions of the machine or making any adjustments be sure the power cord is disconnected from the unit. Check the following:

- The power source should be rated according to unit specifications.
- The unit should not be connected to an electrical circuit with other equipment or where voltages may vary.
- The unit should be installed on a flat, level surface.
- The ambient temperature and relative humidity surrounding the unit should be 50°F to 89.6°F (10°C to 32°C) at 20% to 80% humidity with no condensation.
- The unit should be located in a well ventilate area.
- The unit should receive necessary cleaning and maintenance.

#### The unit should be installed:

- · Away from heat sources and heating or cooling vents.
- · Away from water heaters, steam generators, humidifiers or other areas of high humidity.
- · Away from dusty areas.
- · Away from areas where chemical fumes or gasses are generated or may collect.
- · Away from areas exposed to direct sunlight.

### Check the consumable:

- Verify that the recording paper supply is adequate and that it conforms to the type specified for use in the machine.
- Verify that the recording paper has been stored away from moisture and damp areas.
- Verify that the recording paper has not been damaged in any way.

## 4.2 Recording Paper Jam

Symptom: Recording paper did not exit paper cassette properly or jam occurred in print area.

Suggested corrective action:

- 1. Verify that the recording paper conforms to the type specified for use in the machine, and that has not been damaged or exposed to moisture.
- Make sure the recording paper is properly loaded into the bypass tray and cassette and the cassette is properly closed.
- Clean the paper feed rollers of any paper dust buildup. (Clean using a lint-free cotton cloth moistened with a cleaning designed for use on rubber rollers.) Replace the paper feed rollers if worn or damaged.
- 4. Check the paper guide in the cassette is adjusted properly to the paper and operation is done.
- 5. Verify that the paper has reached sensor PSS. If it has, check the operation of PSS.
- 6. Verify the paper take up roller is turning. If not, check the main motor. If the main motor is turning, check the operation of the paper feed solenoid PFCL.
- 7. If the main motor does not turn, replace the main motor, the power supply unit or the main control PCB.
- 8. Check for obstructions in the paper path.

Symptom: Recording paper jammed as it was exiting the unit into receive paper tray.

Suggested corrective action:

- 1. Check for obstruction in the paper path.
- 2. Check the paper discharge sensor (PDS) for proper operation.
- 3. Clean the exit roller using a lint-free cloth moistened with a cleaning solution designed for use on rubber rollers. Replace the exit roller if worn or damaged.
- 4. Verify the fuser rollers are clean and not damaged. If worn or damaged, replace the fuser.

## 4.3 Document Feeder Jam

Symptom: Original document did not feed into or exit scanner properly, document feeder error message. Suggested corrective action:

- 1. Verify the original documents conform to the specifications designed for use in the machine and that they are not damaged in any way.
- 2. Verify the number of documents placed into the feeder does not exceed its maximum capacity.
- 3. Verify the scanner cover is closed properly.
- 4. Remove any foreign substances from inside the scanner area.
- 5. Verify that all of the document feed rollers are clean and not damaged. Clean using a lint-free cotton cloth moistened with a cleaning solution designed for use on rubber rollers. Replace the rollers if worn or damaged.
- 6. Check the operation of DS1 at connector P82, pins 3-5, on the Connect A PCB.
- 7. Check the operation of the separator roller, and the pick-up roller.
- 8. Verify the operation to the ADF Motor at connector P82, pins 8-12, on the Connect A PCB.
- 9. Verify that the document feeds into the unit and stops. If the document does not stop, check the operation of DS2 at connector P82, pins 6-8, on the Connect A PCB.
- 10. Check all connectors and cables.
- 11. Check the operation of the main control board.

## 4.4 Document Feeder Multi-feeding or Skew

Symptom: Two or more pages of a multi-page document are fed at once.

The document is fed on the skew. Slight skewing may sometimes occur.

Suggested corrective action:

- 1. Verify that the original documents conform to the specifications designed for use in the machine and they are not damaged in any way.
- Verify the pages of the document are not stuck together from glue, wet or damp correction fluid, tape, etc.
- 3. Verify the feed roller, separator roller and separator pad are clean and not damaged. Clean using a lint-free cotton cloth moistened with a cleaning solution designed for on rubber rollers. Replace these items if worn or damaged.

## 4.5 Mirror Carriage Error (MFX-2050/MFX-1450 only)

Symptom: The mirror carriage doesn't move.

Suggested corrective action:

- 1. Verify that the scanner unit locking switch has been released. Release the scanner unit locking switch if it is not released. Then press <Setting>, <\*>, <1>, <4> to turn off the mirror carriage carry mode.
- 2. Verify that the timing belt doesn't out of joint.
- 3. Check the operation of HOME sensor at connector P2, pin 1-3, on the CCD PCB.

## 4.6 Clearing Jammed Paper

## 4.6.1 If the original document jams

1. If an original document jams in the ADF while scanning the document into the memory for faxing or copying, the LCD will show:



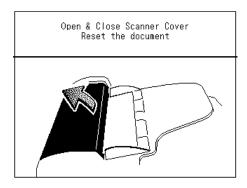
If you do wish to continue the operation, press [Yes] and proceed to step 2.

To abort the operation, press [No]. This will erase from memory all pages stored during this operation, and the machine will return to standby mode.

Important: If you wait more than 60 seconds without pressing any key, the machine will erase from memory all pages stored during this operation and the machine will return to the standby mode.

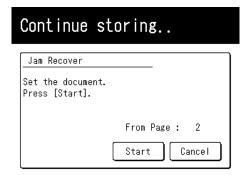
**Note:** If the document jammed in the following case, the following message will appear and the machine will abort the operation anyway; instead, you'll have to perform the job again from scratch.

- The first page of the document jammed
- During the real time transmission or quick memory transmission
- During non-sorting ADF job



Also, the "Repeat transmission. Error on scan at page xx" message will be printed out if the document jammed during transmission.

2. The LCD will show which page (i. e., which page number) is jammed. To continue scanning from the jammed page forward (keeping in mind the Note at the end of step 1, above), press [Start] after clearing the jam.

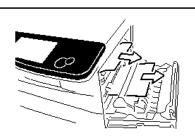


**Note:** If you wait more than 60 seconds without pressing any key, the machine will begin to send or copy the document(s) it has.

If you wish to cancel this operation, press [Cancel]. The machine will delete all pages from memory and then return to its standby mode.

## 4.6.2 If a printout jams inside your machine





1. If paper jams occur the LCD will show:

Follow these procedures to clear the paper jam.

If a paper jam occurs during fax reception, the machine will store the received document in the memory and printout them automatically when you have cleared the paper jam.

CAUTION: When you open the side cover to remove the paper, DO NOT touch the fuser roller.

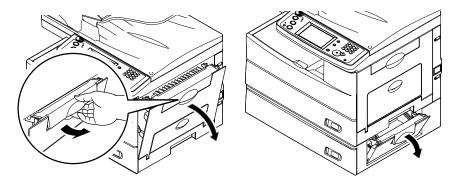
**Important:** Do not touch the drum cartridge surface. Scratches or smudges will result in poor print quality.

### Removing jammed paper

To clear a printout jammed inside your machine:

1. Pull the release lever to open the side cover.

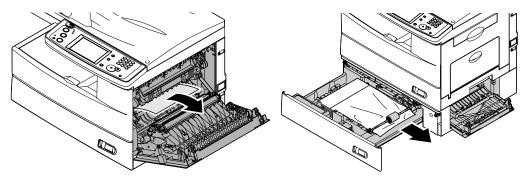
If the optional second cassette is attached, also open the 2nd side cover.



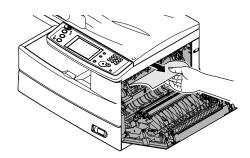
2. Carefully remove the jammed paper in the direction shown.

**Note:** Avoid getting unfixed toner on your hands and clothes when removing jammed paper.

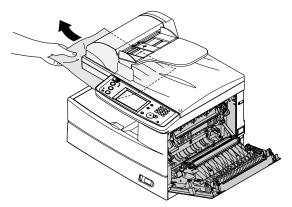
### Jammed in feed area



### Jammed in fuser area

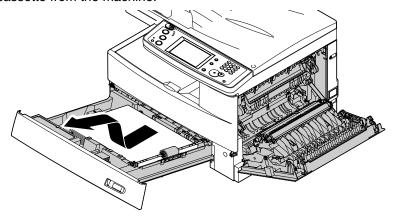


## Jammed in paper exit area

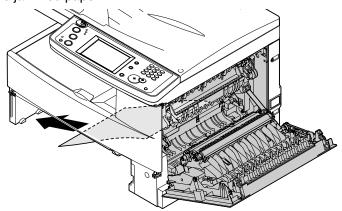


If the jammed paper was fed a little and you cannot seize it easily:

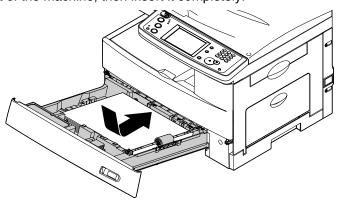
3. Open the paper cassette. After you pull it out completely, lift the front part of the cassette slightly up to release the cassette from the machine.



4. Carefully remove the jammed paper.



5. Close the side cover and insert the paper cassette. Lower the rear part of the cassette to align the rear edge to the slot of the machine, then insert it completely.



## 4.7 Cleaning the Unit

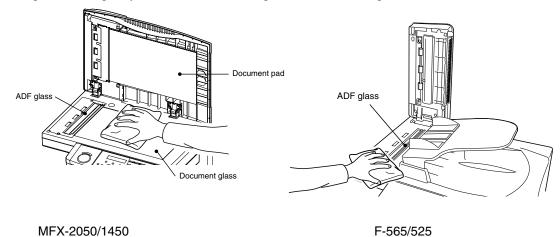
Use a mild cleaning solution on a lint-free cloth to wipe the machine's cover, handset and paper cassette tray. Never spray cleaner directly onto the fax machine as the spray could damage components inside the fax.

# 4.7.1 Cleaning the Document glass, ADF glass and Sheet Document Press

- 1. Open the platen cover.
- 2. Get a soft, lint-free cloth and moisten it with isopropyl alcohol.

**Important:** Make sure the cloth doesn't have any rough areas. Otherwise, it could scratch the glass surface of the FBS.

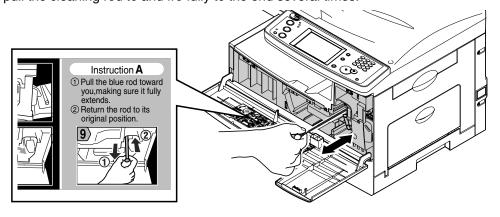
3. Using the cloth, gently clean the Document glass and the ADF glass.



### 4.7.2 Cleaning the drum chare wire and LED print head

If there are streaks on your print, the drum charge wire and LED print head may require cleaning.

- 1. Open the front cover.
- 2. Gently pull the cleaning rod to and fro fully to the end several times.



3. Close the front cover.

## 4.8 Transmit Error

Symptom: Check message prints after attempting transmission.

Suggested corrective action:

1. Reference the error code on the check massage or the journal to the error code list contained in this section.

# 4.9 LCD Error Messages

Your fax machine's LCD messages can help you spot problems.

## LCD error messages (Alphabetic list)

Message on the display	Description / Solution
[Sort] must be turned On when	You tried to set [Sort] to [OFF] while Duplex Copy. Duplex Copy
making a duplex copy.	should be combined with sort.
Add/Edit cannot be performed.	You cannot add/enter destinations to the Address Book while
Года — али одинист реготива	selecting other destinations.
ADF is unavailable	You tried to make a Card Copy using the ADF. Use the document
Set the document on the FBS glass	glass.
Already stored	You tried to select a number that has already been selected. Enter
	a different number.
An attachment cannot be scanned to	You tried to scan to folder with files attached and save them to the
the folder from which it was added.	same folder where the attached files are originally saved.
An I.D.Code is needed	You cannot set "0000" as an I.D. Code for Security box.
An LDAP server has not been	The advanced search failed due to an internal machine error.
registered.Check the LDAP server	Check the LDAP server setting again, and try the search again.
settings.	For more information about LDAP server set up, refer to the MFP
An LDAP server has not been	User's Guide or PC User's Guide.
selected.Check the LDAP server	
settings.	
An LDAP server must be registered	LDAP server has not been set up. To use the advanced search,
	set up the LADP server on your machine prior to searching. For
	more information, refer to the MFP User's Guide or PC User's
	Guide.
Auto ratio is set.	Auto ratio is selected automatically.
	To specify the zoom ratio, press [Zoom] and enter your desired
	zoom ratio.
Box in use.	You tried to erase an F-Code box which contains at least one
Proodoost connet be turned off	document. Erase the document(s), then try again.
Broadcast cannot be turned off.	You tried to set Broadcast to [OFF] after multiple destinations have been selected.
Calibrating Scannor	
Calibrating Scanner Call Service :Code	The scanner is warming up now An internal error has occurred. See "4.11 Service Call Error" on
	page 4-17 how to solve the problem.
Cannot change the setting for Rx	The cassette/tray you selected is used for separator page. Select
separator cassette.	other cassette/tray.
Cannot combine with Card copy	Your selected function cannot be combined with card copy.
Cannot enter additional commands	The stored commands are full. Wait until one or more jobs are
	done.
Cannot find the domain	DHCP configuration failed. Check the Network setting. For more
	information, refer to the MFP User's Guide or PC User's Guide.
Cannot select mode during Fax&Copy	You tried to switch the mode to others while Fax&Copy mode.
On most store in a second	Changing mode in Fax&Copy is not available.
Cannot store in a secure box.	You tried to store a document in an F-code Secure box. If you
Connet use the corresponds for healt	need to store documents, use an F-code Bulletin box.
Cannot use the same code for both	You cannot use the same protect code for "Read/Write" and "Read
Read/Write and Read Only.	Only". Enter a different one.
Check Paper Source	The selected paper is not suitable for copying or printing. Select other paper source.
Check the paper size.	The loaded paper does not match the paper registered in the
Open & Close Front cover.	machine. Set correct sized paper or change the paper size setting.
	Open and close the front cover to reset the printer.

Message on the display	Description / Solution
Close XXX Cover	The cover indicated on the display is open or has not been closed
	securely. Close it properly.
Close XXX cassette	The paper cassette indicated on the LCD is open or has not been closed securely. Close it properly.
Close the Scanner Unit	The scanner unit is open. Close the scanner unit.
Communication error	A communication error disrupted the reception or transmission. If you were transmitting, press <stop> to clear the error message and then re-try the transmission. If you were receiving a fax, try to contact the other person and have him/her re-try the transmission.</stop>
Communication in progress.	The function is not available during communication. Wait until it ends.
Contact service for printer option	An internal error has occurred.
Continue to store?	The document has jammed while being stored into memory. To
[Yes] [No]	continue storing press [Yes], to cancel the job press [No].
Copy protected	Copy is protected. To copy, set [Copy protect] to [OFF].  During copy protection, Macro program is disabled.
Copy reservation has been disabled.	Copy reservation is disable. Wait until the present job is completed.
Cover Open	Close XXX Cover The cover indicated on the LCD is open or has not been closed securely. Close it properly.
DHCP server did not respond.	DHCP configuration failed. Check the network connection. If the LAN cable is not connected, connect it to the machine to connect to the LAN. If the DHCP server is not installed on your network, turn off the "DHCP setting" and register the IP address manually. For more information, refer to the MFP User's Guide or PC User's Guide.
Dialing number has not been set.	You are selecting a non-registered address book number. Check the address book number and try again.
Document full	You tried to store a document in a Batch Tx box, but the machine has reached its capacity (40 documents). Delete unnecessary documents stored or use other Batch Tx box.
Document stored	You tried to erase a batch box which contains at least one document. To erase a batch box, erase all the documents stored in the box.
Drum should be replaced.	The drum cartridge has run out. Replace with a new drum cartridge.
Enter location.	No destinations are entered. Enter at least one destination to register the setting.
Enter the end day.	The end forwarding day is not entered in Fax forward setting.
Enter the end time.	The end forwarding time is not entered in Fax forward setting.
Enter the start day.	The start forwarding day is not entered in Fax forward setting.
Enter the start time.	The start forwarding time is not entered in Fax forward setting.
Enter the sub-address	You tried to create an F-code box without entering a sub-address. Sub-address is a required field.
Error	The image transfer failed. Check the printed out "Check Massage" to identify the error.
Error on Printing	You cannot print a file that is larger than 10 MB. User PC print function to print the file.  – or –  Memory has overflowed during printing. Try again later.
Feeder In Use	There is a manual delayed transmission reserved in the ADF. Wait until the job is finished, or cancel the delayed transmission by removing the document.
Follow Instruction A	Follow the instruction that will be displayed on the screen to clean the charge wire.
Incorrect passcode	The entered passcode is wrong. Enter the correct passcode.
Invalid Address Book Location!	A non-registered address book number is selected. Either choose another number or manually dial the number.

Message on the display	Description / Solution
Invalid characters have been entered.	You entered invalid characters. To register a Shortcut, insert the
and onditations have been emered.	PC name between "//" and "/". To register a File Name, special
	characters such as "\", "/", ":", "*", "?", "<", ">" or " " cannot be
	entered. To register NetBIOS characters other than the alphabet
	and numbers between 1 to 9.
Invalid I.D.code	The F-code box I.D. code you entered is not valid. Try re-entering
	your F-code box I.D. code.
Invalid number!	You entered a number which is not valid for the current operation.
Invalid Paper Size	The selected paper is not suitable for duplex printing. Select other
	paper source. Select plain paper in the regular size.
Invalid parameters!	You entered an invalid value or pressed [Enter] without entering a
	value.
	- or -
	The advanced search failed due to an internal machine error.
	Check the LDAP server setting, and try the search again. For more information about LDAP server set up, refer to the <i>MFP User's</i>
	Guide or PC User's Guide.
Jam Recover.	You selected to continue the job. The machine is instructing you
Set the document. Press [Start].	from which page to set the document. Set the document again from
From Page :	that page that the machine is indicating you and press <start>. To</start>
[Start] [Cancel]	cancel and finish the job, press [Cancel].
Lamp error. Call for service.	The scanner lamp is dim or not operating.
	Make repeated copies to help evaporate any internal moisture. If
	that doesn't resolve the problem, replace the lamp.
LDAP reference execution error	The advanced search failed due to an internal machine error. Try
	the search again.
Link Path is required.	You tried to register a shortcut without entering [Link]. To register a
	Folder or FTP server shortcut, you should enter the [Link].
Load XXX paper	Load the paper specified by the machine.
Load paper	There is no paper either in the cassette or in the bypass tray. Load paper.
Load paper for reception	The paper run out during fax reception. Load paper.
Load paper in the bypass tray	There is no paper either in the cassette or in the bypass tray. Load
	paper.
Load paper into the XXX cassette	There is no paper in the XXX cassette. Load paper in it.
Macro in use	You cannot press [Macro Program] while you are registering a
	Macro.
Mail transmission error	The transmission failed. Check the printed out "Check Massage" to
	identify the error.
Memory full. Printing will resume	There is not enough memory to store the print job. Wait until some
when mem. is free.Press [OnLine] to	reserved jobs are finished and the memory becomes free.
stop.  Memory overflow Rx	Memory has overflowed during the fax reception.
WELLIOT OVERLOW DX	Press <stop> to return the standby screen.</stop>
Memory overflow.	You tried to enter more pages into memory than your machine
wichiory overhow.	could store.
Memory overflow. Number of stored	You tried to store more pages into memory than your machine
page: Store these pages?	could store. Press [Yes] to keep the scanned pages in memory,
[Yes] [No]	or press [No] to delete all pages stored during this operation. The
	display shows how many pages are stored.
Name is required	You need to enter a name for the registration.
No command stored	You pressed <fax cancel="" confirm.="" job=""> to review upcoming</fax>
	commands, but your machine has no command stored.
No document stored	You tried to print a document from memory, but your machine has
	no documents in storage.
No Drum Cartridge	The drum cartridge is missing or has not been properly installed in
	your machine. Please properly install the drum cartridge.

Message on the display	Description / Solution
No Drum Cartridge	The drum cartridge is missing or has not been properly installed in your machine. Please properly install the drum cartridge.
No paper type set on the PC On XXXX	The cassette/tray selected for printing is empty. Please set the paper indicated in the message and print your job, or press
Please set paper (Letter Plain) To cancel select [Cancel]	[Cancel] to cancel.
No paper type set on the PC	The paper selected for printing is not set to the machine. Please
Please set paper (XXXX)	set the paper indicated in the message and print your job, or press
To cancel select [Cancel]	[Cancel] to cancel.
No polling document	You tried to print out or delete a polling document when there is no polling document in memory.
No protect passcode	To protect the setting of User Access / Cost accounting, Security reception or to mask the PIN, you need to set the protect passcode in advance.
No report	You requested an activity journal or transmit confirmation report, but your machine has no record of any fax jobs occurring.
No Toner Cartridge	The toner cartridge is missing or has not been properly installed in your machine. Please properly install the toner cartridge.
Not enough memory	The machine cannot store documents into memory any more.  Delete unnecessary documents stored or wait until a reserved job is done.
Not registered	You pressed a key which is not programmed with any command.  – or –  You tried to delete a non-registered item. Non-registered items cannot be deleted.
Nothing has been selected	You tried to press [Enter], when nothing has been selected. To change the settings or to select destinations, first select items from the list, then press [Enter].
Nothing has been stored	You tried to display the jobs in queue, when there is no job.
Open & Close Scanner Cover	A document has jammed in the ADF. Follow the instruction on the
Reset your document	display and removed the jammed document.
Open front Cover	Open the front cover. The cover position is located on the display.
Paper Count Error	The scanned page numbers for the first side and the back side of the documents did not match.  Fan the document to prevent more than one sheet being drawn trough at a time, and try the operation again.
Paper size error for XXXX	The cassette/tray selected for printing has no suitable paper for
On XXXX	printing the job. Please set the paper indicated in the message and
Please set paper (YYYY) To cancel select [Cancel]	print your job, or press [Cancel] to cancel.
PC Printing Canceled	In PC printing, the size of paper in the paper cassette does not match up the paper size you specified by the printer driver. Press [Stop] to cancel a print job. Then load the correct paper size and try printing the document again.
Phone connection terminated	The telephone connected to the machine is hanging up. Hang it down.
PIN has not been registered.	You selected "Mode1" in the PIN mask feature and tried to call an address book number in which no PIN has been entered, or to call using numeric keys without a PIN. Enter a PIN.
Please Check File:	The file you have tired to print is not compatible with the "Print on
Decode Error	Demand" function.
	"Print on Demand" only supports files that were originally scanned by an F-525, F-565, MFX-1450 or MFX-2050 as a TIFF or PDF file (Color PDF images are not compatible with this feature). Use PC
Please enter a value between	print function to print the file.  The value you entered exceeds the Zoom range. Enter a value
25-100%	within the range.
Please enter a value between	The value you entered exceeds the Zoom range. Enter a value
25-400%	within the range.
Please enter text.	You cannot view the text when there is no text entered. Enter the text in advance.

Message on the display	Description / Solution
Please install the drum cartridge	The drum cartridge is missing or has not been properly installed
correctly.	in your machine.
Diagon install the tener contrides	Please properly install the drum cartridge.
Please install the toner cartridge correctly.	The toner cartridge is missing or has not been properly installed in your machine. Please properly install the toner cartridge.
Please Remove Paper	Paper has jammed in the machine. Follow the instruction on the
Tiedse Hemove Faper	display and removed the jammed paper.
Please set up Security Reception	The Security Reception is not set up. To use this function set
	up Security Reception in advance.
Please Supply Paper	There is no paper either in the cassette or in the bypass tray. Load paper.
Please wait	Your machine's printer is either warming up or busy. Please wait until the machine is finished printing and then re-try your command or operation.
Preparing	Your machine's printer is either warming up or busy. Please wait until the machine is finished printing and then re-try your command or operation.
Press [Stop] to end the job.	Document remains from the operation prior to the interrupt.  Press <stop> to discharge the document.</stop>
Press the Fax Cancel key to stop the transmission.	Pressed <stop> during fax transmission. Cancel the transmission by <fax cancel="" confirm.="" job="">.</fax></stop>
Printer in use	The machine cannot execute the job while printing. Wait until the printing is finished and re-try the operation.
Printer Jam.	Paper has jammed. Follow the guidance on the display and remove the paper.
Ratio is set to 100%.	The zoom ratio is set to 100%. To change the zoom ratio, set it again.
Real time transmissions cannot be archived.	You tried to send a fax using real time transmission or set memory transmission to [OFF] when the archive function is set up.
	To archive the document, use memory transmission.
Real time TX in progress. Cannot print.	The machine cannot print out the job until the current communication finishes. Please wait.
Replace the drum	The drum cartridge has run out. Replace with a new drum cartridge.
Reset the document	Remove the document from the ADF, and set them again.
Rx document stored	To set the security reception to [OFF], first print out the stored security receipted document.
Scanner Adjusting	Your machine's scanner is preparing. Please wait until the machine is ready.
Scanner in use	The machine cannot execute the job until the current job finishes. Please wait.
Select Paper Size	The selected paper is not suitable for the document. Select other paper.
Select paper source	There is no paper that fits the copying document. Select on which paper to copy or load paper.
Server Initializing	The machine's network is now preparing. Please wait until it is ready.
Set document in the ADF	You tried to make a [2-> 2side] or [2 -> 1side] copy using the document glass. Those copy are only available from the ADF.
Set individual forwarding numbers first	The Fax Forward is not set up. To use this function, set up the forwarding condition in advance.
Set paper: XXXX	There is no paper in the bypass tray. Load the paper indicated on the display.
Set the Read/Write Code first.	You tired to create a "Read Only" protect code prior to "Read/Write" code. Create a "Read/Write" code first.

Message on the display	Description / Solution
Setting must be changed from the browser	When the machine is on the Network, you cannot set Fax Forwarding from the machine side. Use the browser for the setting.
Supply Separator Paper in XXXX	The paper for separator reception has run out. Load paper in the designate cassette/tray.
The drum is low.	Your drum will need to be replaced soon.
The following data is required: Fax or e-mail	The fax number or e-mail address is not registered to the Address Book. Either fax number or e-mail address must be registered.
The following data is required: Fax or e-mail, PIN number	The fax number with PIN number or e-mail address is not registered to the Address Book in PIN mask mode 1. Either fax number or e-mail address must be registered. For fax numbers, the PIN number must also be entered after entering the fax number and an "*" (asterisk).
The LDAP server cannot be found. Check the LDAP server settings.	The advanced search failed due to an internal machine error. Check the LDAP server setting again, and try the search again. For more information about LDAP server set up, refer to the MFP User's Guide or PC User's Guide.
The NetBIOS name entered is already in use.	The NetBIOS name conflicts with other device. Contact your Network Administrator.
The number of file attachments and/ or file size limit has been exceeded. Please delete attachments until you reach the acceptable limit.	You can add up to 10 network files (or up to 10 MB worth of files) to the scanned job. Delete files so that it meets the limit.
The number of the browse results exceeds the limit.	You browsed a folder where too many files or folders are located. To scan to the folder, register the folder as a shortcut using the [Keypad] or select another folder. To attach files from the folder, copy the files to a new folder and attach them.
The numeric keypad cannot be used.	You cannot use numeric keys while selecting group members.
The storing process has not finished.	The machine cannot execute the job until the current job finishes. Please wait.
The toner is empty.	Toner is empty. Replace with a new toner cartridge.
The toner is low.	The machine is almost out of toner.  Prepare a new toner cartridge.
There are no vacant numbers.	You have already registered 300 locations to the Address Book. To register a new location, first delete the unnecessary locations first.
There is no applicable data.	You selected a key on the index, to which no destination is categorized.
This function cannot be used.	You selected a function that is currently not available. Change the function you set prior to this function or cancel this function.
This Resolution cannot fit specified Zoom value.	You try to set a resolution that is not available in the set zoom ratio. Change either the resolution or the zoom ratio to do the job.
This setting is protected	The User Access / Cost accounting setting is protected. To change the setting, release the protection.
To initialize IP address you must shutdown.	IP address is entered or edited. Power off and then on to save the setting.
Toner should be replaced.	Toner is empty. Replace with a new toner cartridge.
Too many characters	You entered more characters than the limit. Re-enter them so that it contains the limit.
Too many locations.	You entered more location than the limit. Re-enter them so that it contains the limit.
TTI data has not been registered	The Transmit Terminal Identifier (TTI) is not registered. To select the TTI, register the TTI in advance.
Unable to delete	The job you selected was carried out before deleting.
Use the scanner glass	You tried to make a zoom up copy using the ADF. To make a zoom up copy, use the document glass.

## 4.10 Error Codes

If an error occurs during a communication, a check message will be printed. The following provides an explanation of the information found on check messages.

- A possible solution to the problem
- The date and time of the attempted communication
- The sending location (if the remote fax has a Location ID)
- The number of pages which got through before the error terminated the call
- The error code
- The sample document.

You will also see a code listed in the Result column of the report. Result codes indicate the specific problem encountered:

- "D" codes occur while dialing
- "R" codes occur during reception
- "T" codes occur during transmission

Here is a list of error codes the fax machine may print.

## 4.10.1 Dialing errors

- **D.0.2** The remote unit is busy. Try the call again.
- **D.0.3**, The remote unit didn't respond, the call couldn't be completed or stop was pressed during
- **D.0.8** dialing. Retry the call. If your machine repeats the message, call the remote fax unit's operator and verify that unit is operating properly.
- **D.0.6,** Either the remote unit didn't respond, the call somehow didn't go through or <Stop> was
- **D.0.7** pressed during dialing. Try the call again.

### 4.10.2 Reception errors

- **R.1.1** T1 time-out. The calling unit was not a fax machine or the transmitting unit is having difficulties.
- **R.1.2** The two fax machines were incompatible. Your machine sends and receives only ITU-T Group 3 fax communication, the industry standard since the early 1980s.
- **R.1.4** Someone pressed <Stop> during fax reception.
- **R.2.3** Poor phone line conditions made fax communication impossible. Enable the one second pause after CED on Memory Switch 020. Also try increasing the echo wait time on Memory Switch 021 if echo is on the line.
- **R.3.1** No response to CFR. DCN was received from the transmitter. Poor line conditions made communication impossible. Adjust the echo wait time on Memory Switch 021. Try increasing the output levels via Machine Parameter 001.
- **R.3.3** Too many errors were detected during data reception. The carrier was interrupted. Increase the data error rate on Memory Switch 020.
- **R.3.4** DCN was received after FTT. Communication was not possible at 2400 bps. Poor phone line conditions prevented fax communication. Enable the Eye Quality Check on Memory Switch 031 and 032.
- **R.4.1** The machine received too large length data that over your machine's limit.
- **R.4.2** MPS/EOM/EOP was not received. Either the line disconnected before reception was completed or too many errors were detected by the receiving unit. Adjust the data error rate on Memory Switch 020. It may also be necessary to decrease the receive communication speed via Memory Switch 020.
- **R.4.4** The receiving fax machine has reached its memory capacity.
- **R.5.1** DCN was received instead of RR during ECM communication.
- **R.5.2** Line noise or other problems prevented ECM reception.
- **R.8.1** A compatibility error occurred.
- **R.8.10** Line noise or other problems prevented line probing.
- **R.8.11** The fax machine timed out while waiting for the retrain signal.

### 4.10.3 Transmission errors

- **T.1.1** T1 time-out. The remote fax machine didn't respond to your machine. This usually occurs during a manual transmission or when an incorrect number was dialed. Call someone at the remote machine.
- **T.1.4** Someone pressed <Stop> during fax transmission.
- T.2.1 CFR or FTT was not received from the remote machine. Either the phone line disconnected during fax communication or transmission became impossible due to bad phone line conditions. Try the call again. It may be necessary to increase the output levels on Machine Parameter 001. The receive machine may also have closed network or block junk fax enabled.
- **T.2.2** The two fax machines were incompatible. No mailbox at receiver or security transmission is enabled.
- T.2.3 FTT was received from the remote machine at 2400 bps. Bad phone line conditions made fax communication impossible. Conditions can change rapidly, so try the call later. Turn on the echo protect tone on Memory Switch 010. Also adjust the interval between DCS and TCF on Memory Switch 011. If the problem persists, try increasing the output levels on Machine Parameter 001.
- **T.3.1** The page counter in the fax machine detected a document feeder error during transmission. Carefully re-insert the document into the feeder and re-try the call.
- T.4.1 No response to MPS/EOP/EOM. Poor phone lines caused the receiving unit to disconnect. Adjust the interval between CFR and data on Memory Switch 011. Try increasing the output levels on Machine Parameter 001. It may also be necessary to adjust the transmit speed on Memory Switch 010.
- **T.4.2** RTN was received from the remote machine. After transmission began, poor line conditions developed. Try the call again. Attempt the solutions described for the T.4.1 error.
- **T.4.4** Poor line conditions prevented transmission. PIP was received. The transmission was interrupted by the call mode. The receiving unit may be experiencing problems. Try the call again.
- **T.5.1** No response to RR from the remote machine. Line noise or other problems prevented ECM transmission. Increase the ECM response time on Memory Switch 012.
- **T.5.2** No response to CTC. Line noise or other problems prevented ECM transmission. Increase the ECM response time on Memory Switch 012.
- **T.5.3** EOR was received from the remote unit but further transmission was not possible. Adjust Memory Switch 015 for this problem.
- **T.8.1** A compatibility error occurred.
- **T.8.10** Line noise or other problems prevented line probing.
- **T.8.11** The remote fax machine didn't complete the equalizer training phase.

## 4.11 Service Call Error

When certain machine problems occur these message will appear in the LCD.

### 4.11.1 Please Call Service XX

XX stands for a code which describes an error message:

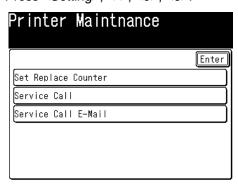
Code Error Message

- 1: RX Motor Error
- 2: Fan Error
- 3: Fuser Error
- 4: Drum Error
- 5: Developer Error

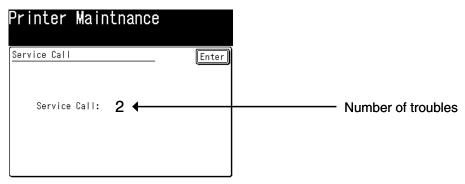
When certain machine problems occur a "Please Call Service" message will appear in the LCD. When this message appears, access the printer maintenance mode / Service call function to determine the cause of the "Please Call Service" error message.

To access the printer maintenance modes:

1. Press <Setting>, <\*>, <0>, <6>.



- 2. Press [Service Call].
- 3. The kind of printer error will be displayed. If happens two or more troubles, the number of troubles is displayed on the right upper of the LCD. For example, when "Heater error" and "Drum Fuse Error" has occurred, the LCD shows 2.



- 4. Press [Enter] to show the other printer error.
- 5. Press <Reset> to exit this mode.

**Note :**To let the error noticed via e-mail, see "3.9 Printer maintenance mode" on page 3-108 how to set is up.

#### **RX Motor Error**

Suggested corrective action:

- 1. Check the connection between RX motor and the Connect A PCB (P90).
- 2. Verify the RX motor rotates when the power is on. If OK, see step 6.
- 3. Check the power is supplied to the Rx motor. If it does not, see step 5.
- 4. Replace the RX motor if it doesn't rotate.
- 5. Replace the Connect A PCB.
- 6. If the problem is not correct, replace the main control board.

### **Fan Error**

Suggested corrective action:

- 1. Verify the inside fan rotates when the power is on.
- 2. Check the connection between the fan and Connect A PCB(P87), Connect A PCB (P80C) and the main board.
- 3. Replace the fan motor if it doesn't rotate.
- 4. Replace the Connect A PCB.
- 5. Replace the main control board.

### **Fuser Error**

Suggested corrective action:

- 1. Turn on the power again, and verify the fuser warms up. If it does not, see step 4.
- 2. Check the contact between Fusing thermistor and Connect A PCB(P89).
- 3. Check the contact between Connect A PCB (P80C) and the main board.
- 4. Replace the Fuser.
- 5. After replacing the Fuser, verify the fuser warms up when the power is on.
- 6. Replace the main control PCB.

### **Drum Error**

Suggested corrective action:

- 1. Verify the drum cartridge is set correctly.
- 2. Check the point of contacts between drum cartridge and Connect A PCB (P86).
- 3. Check the contact between Connect A PCB (P80C) and the main board.
- 4. Replace the drum cartridge.
- 5. Replace the Connect A PCB.
- 6. Replace the main control PCB.

### **Developer Error**

Suggested corrective action:

- 1. Verify the toner cartridge is set correctly.
- 2. Check the point of contacts between toner cartridge and Connect A PCB (P86).
- 3. Check the contact between Connect A PCB (P80C) and the main board.
- 4. Replace the toner cartridge.
- 5. Replace the Connect A PCB.
- 6. Replace the main control PCB.

## 4.12 The Image Quality Problems

The following provides guidelines for troubleshooting the printer engine and actions to be taken. Before removing any portions of the machine or making any internal adjustments, be sure power to the unit is OFF. Suggested corrective actions should be performed in order as listed. Most conditions can be corrected by performing routine preventative maintenance steps. If printer or print quality problems occur, check the following.

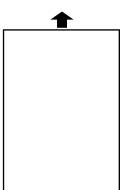
#### The unit:

- 1. Should have the power cord correctly connected.
- 2. Should be connected to a power source which is rated to machine specifications.
- 3. Should be installed on a flat, level surface.
- 4. Should receive good ventilation.
- 5. Should not be connected to an electrical circuit with other equipment or where voltages may vary.
- 6. Should not be installed near a direct heating or cooling source or vent.
- 7. Should not be exposed to high dust concentration.
- 8. Should not be exposed to direct sunlight
- 9. Should not be exposed to high temperatures, high humidity, steam or chemical fumes.

### 4.12.1 Blank pages

Symptom: Page is solid white.

#### Poor development



- The drum cartridge or toner cartridge may be not installed correctly. Install each cartridge correctly.
- · Replace the Toner cartridge.

### Improper LED exposure

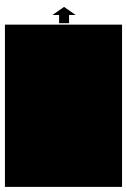
- Replace the LED Print Head Unit.
- Replace the Main Control PCB.

#### Improper charging

- · Replace the High Voltage Unit.
- · Replace the Main Control PCB.

## 4.12.2 Black pages

Symptom: Page is solid black.



#### Improper LED exposure

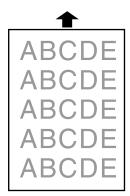
- · Replace the LED Print Head Unit.
- · Replace the Main Control PCB.

### Improper charging

- Replace the High Voltage Unit.
- · Replace the Main Control PCB.

## 4.12.3 Printout too light

Symptom: Printed image is faint or does not print solid.



### Poor development

- The drum cartridge or toner cartridge may be not installed correctly. Install each cartridge correctly.
- · Replace the Toner cartridge
- Replace the High Voltage Unit.
- · Clean the LED print head.

#### **Defective Drum**

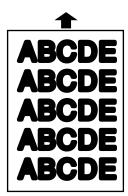
· Replace the Drum Cartridge.

### Poor image transfer

- · Replace the Image Transfer Unit.
- · Replace the High Voltage Unit.
- · Replace the Main Control PCB

### 4.12.4 Printout too dark

Symptom: Printed image is faint or does not print solid.



### Poor development

- The drum cartridge or toner cartridge may be not installed correctly. Install each cartridge correctly.
- · Replace the Toner cartridge
- · Replace the High Voltage Unit.
- Clean the LED print head.

#### **Defective Drum**

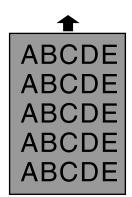
• Replace the Drum Cartridge.

### Poor image transfer

- Replace the Image Transfer Unit.
- · Replace the High Voltage Unit.
- Replace the Main Control PCB.

## 4.12.5 Blurred background

Symptom: Copies show a gray or dark background.

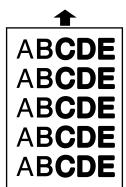


### Poor development

- · Replace the High Voltage Unit.
- · Replace the Main Control PCB.
- Replace the Toner Cartridge.
- · Replace the Drum Cartridge.

## 4.12.6 Uneven print density

Symptom: Image graduates from dark to light across page.



### Poor development

- The drum cartridge or toner cartridge may be not installed correctly. Install each cartridge correctly.
- · Replace the Toner cartridge
- · Replace the High Voltage Unit.
- · Clean the LED print head.

### **Defective Drum**

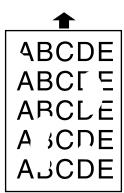
- If the drum surface for moisture condensation found, leave drum in unit with power on to dry.
- · Replace the Drum Cartridge.

### Poor image transfer

- · Replace the Image Transfer Unit.
- · Replace the High Voltage Unit.
- Replace the Main Control PCB.

# 4.12.7 Irregularities

Symptom: Portions of image are broken or missing.

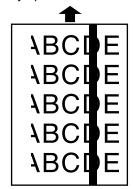


#### Poor image transfer

- · Replace the Image Transfer Unit.
- Replace the High Voltage Unit.

# 4.12.8 White (Black) Line

Symptom: White or black strip appears vertically through image.



#### Poor development

• Replace the Toner Cartridge.

#### **Defective Drum**

• Replace the Drum Cartridge.

#### Improper charging

- · Clean the Charge Wire.
- · Replace the Drum Cartridge.

#### Improper fusing

· Replace the Fusing Unit.

#### Poor image transfer

• Replace the Image Transfer Unit.

#### Improper LED exposure

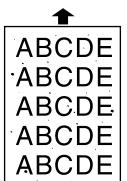
Replace the LED Print Head Unit.

#### Poor scanning

Clean the ADF glass.

# 4.12.9 Toner Smudges

Symptom: Background appears "peppered" with black spots.



#### **Poor scanning**

• Clean the ADF glass.

# Improper fusing

• Clean the Fusing Rollers. If it is not effective, replace Rollers or the Fusing Unit.

#### Improper cleaning

· Replace the Drum Unit.

# 4.13 LCD Failure

Symptom: No display in the LCD.

#### Suggested corrective action:

- 1. Verify that the power cord is correctly connected and the power switch is ON.
- 2. Check for a blown fuse or open circuit on the unit's internal power supply.
- 3. Check the DC output voltages from the power supply unit to connector P3 on the main control PCB. If any of the following voltages are incorrect, replace the power supply.

Pin 4, 5
Pin 8, 9
Pin 6, 7, 10, 11, 14, 15
GND

- 4. Check the following connectors:
  - LCD assembly to the Panel PCB (P52)
  - Panel PCB (P50) to the Harness to the main control PCB (P5)
- 5. Replace the associated PCBs and connector harness.

# 4.14 General Power Failure

Symptom: Unit will not power up.

#### Suggested corrective action:

- 1. Verify that the power cord is correctly connected and the power switch is ON.
- 2. Verify that the electrical outlet is on.
- 3. Check for a blown fuse or open circuit on the unit's internal power supply.
- 4. Check the DC output voltages from the power supply unit to connector P3 on the main control PCB. If any of the following voltages are incorrect, replace the power supply.

Pin 4, 5 : +5 V
Pin 8, 9 : +3.3 V
Pin 6, 7, 10, 11, 14, 15 : GND

• Pin 12, 13 : +24 V@Pin 1:5 V • Pin 12, 13 : +17 V@Pin 1:0 V

# 5 Maintenance & Adjustment

5.1 Maintenance schedule	5-2
5.2 Re/Disassemble	5-3
5.2.1 COVERS	5-5
5.2.2 PCBS	5-15
5.2.3 SCANNING SECTION	5-25
5.2.4 PRINTER SECTION	5-43
5.3 Adjustment	5-70
5.3.1 Outline of printer registration adjustment	5-70
5.3.2 Printer registration mode	5-70
5.3.3 Registration adjustment	5-73
5.3.4 Zoom adjustment	5-77
5.3.5 SEPARATION PRESSURE ADJUSTMENT	5-81
5.3.6 CLEANING THE MIRRORS A, B AND C	5-82

# 5.1 Maintenance schedule

#### ☐ Scanning Section

Parts Name	Maintenance Cycle (pages)		OTV	Deference Dage	
rans name	Clean	Replace	QTY	Reference Page	
Roller Separator*1	•	60,000 or 2 years	1	5-25	
Pad Separator*1	•	60,000 or 2 years	1	5-37	
Contact glass & Pane*2	Clean when dirty		1		
Sheet document press (White sheet) *2	Clean when dirty		1		
Exposure Lamp*2		10,000 hours	1	5-19	
Roller Feed	~	100,000	1	5-26	
Roller Exit	<b>✓</b>	100,000	1	5-28	

<sup>\*1</sup> Replace these parts at the same time.

#### ☐ Printer Section

Davida Marina	Maintenance Cycle (pages)		OTV	Defenses Dane
Parts Name	Clean	Replace	QTY	Reference Page
Roller Transfer		60,000	1	5-48
Roller Register	~	100,000	1	5-49
ASSY FUSER		100,000	1	5-53
Roller Exit	~	100,000	1	5-54
Roller Pickup MP	•	60,000 or 2 years	1	5-52
PAD Pressure MP	•	60,000 or 2 years	1	5-52
Roller Pickup CST	•	60,000 or 2 years	1	5-55
PAD Pressure CST	•	60,000 or 2 years	1	5-55
Roller Feed Duplex (Duplex models only)	•	60,000 or 2 years	2	5-62

# $\hfill\square$ Developing Section

Parts Name	Maintenance	Cycle (pages)	QTY	Reference Page
Faits Name	Clean	Replace	QII	
MFX-2050/1450 Drum cartridge		30,000	1	
F-565/525 Drum cartridge		20,000	1	See Operating Instructions
MFX-2050/1450 Toner cartridge		16,000		
F-565/525 Toner cartridge		14,000	1	
Drum charge wire and LED print	_		1	
head			ı	

**Note:** " ✓ " means to clean the mechanism when a paper take-up or transport failure or print quality problems occurs.

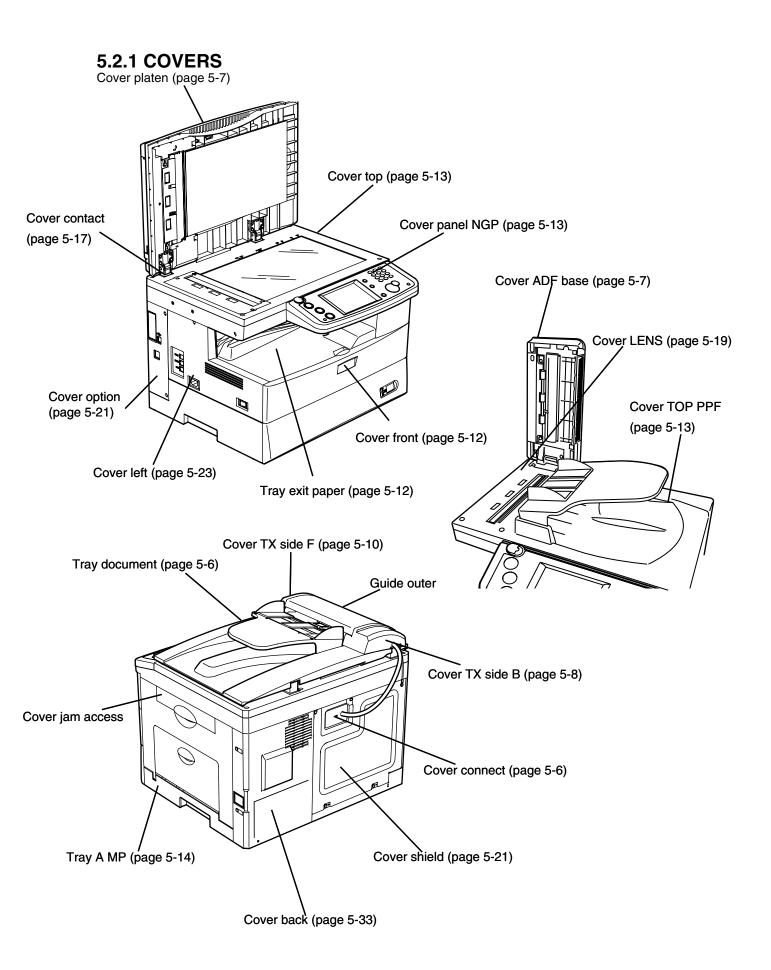
<sup>\*2</sup> It is not a maintenance parts. However, please replace when it becomes not works.

# 5.2 Re/Disassemble

Before disassembling, disconnect the power cord and line cord.

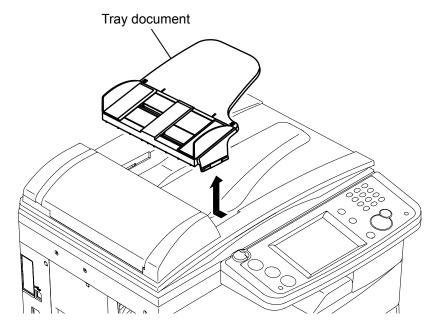
5-5
5-6
5-6
5-7
5-7
5-8
5-9
5-10
5-11
5-12
5-12
5-13
5-13
5-14
5-15
5-16
5-16
5-17
5-18
5-19
5-19
5-20
5-21
5-22
5-22
5-23
5-24
5-25
5-25
5-26
5-28
5-29
5-30
5-32
5-33
5-34
5-35
5-36
5-36
5-37
5-38
5-39

SENSOR DS1/DS2	5-40
FBS MOTOR (MFX-2050/1450 only)	5-41
ASSEMBLING THE FBS MOTOR (MFX-2050/1450 only)	5-42
5.2.4 PRINTER SECTION	5-43
SOLENOID	5-43
CLUTCH (MG)	5-43
RX MOTOR	5-44
MOTOR DUPLEX	5-44
SPRING CLUTCH	5-45
FRAME DRIVE GEARS	5-46
ROLLER TRANSFER	5-48
ROLLER REGISTER	5-49
SENSOR TRAYS	5-50
SENSOR JAMC1	5-51
COVER SWITCH	5-51
SENSOR PSS	5-52
ROLLER PICKUP MP / PAD PRESSURE MP	5-52
ASSY FUSER	5-53
SENSOR PDS / DPS	5-54
ROLLER EXIT	5-54
ROLLER PICK UP (1st CST) / (2nd CST)	5-55
PAD PRESSURE (1st CST) / (2nd CST)	5-55
PIECE COVER CST (1st CST Paper dust)	5-56
SENSOR JAMC2	5-56
SENSOR PES2	5-57
ROLLER FEED 2ND (2nd CST)	5-57
PLATE FRAME B (2nd CST)	5-58
PLATE FRAME B GEARS (2nd CST)	5-59
SPRING CLUTCH (2nd CST)	5-60
SOLENOID (2nd CST)	5-60
SENSOR OPEN2	5-61
ROLLER FEED DUPLEX	5-62
TONER SENSOR 1, 2 (TS1, TS2)	5-64
SENSOR PES1	5-67
SENSOR OPEN1	5-68
LED	5-69



# TRAY DOCUMENT

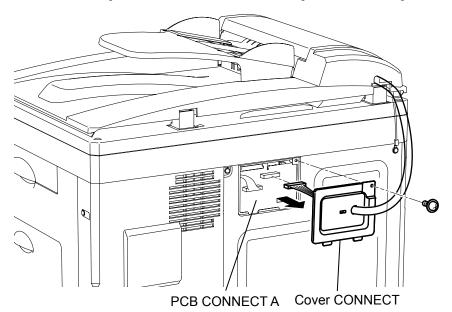
- 1) Release the locking tab from the Cover platen.
- 2) Remove the TRAY DOCUMENT.



# **COVER CONNECT**

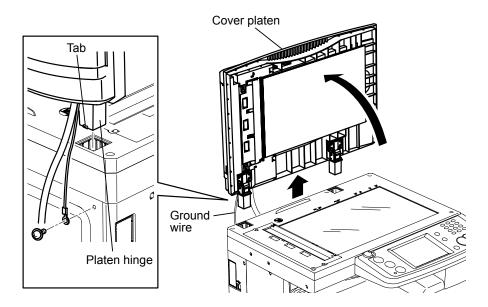
- 1) Remove the Cover connect mounting screw.
- 2) Disconnect the connector on the PCB CONNECT A.
- 3) Remove the COVER CONNECT.

Note: When reattaching the Cover connect, be careful not to get the harness caught on the Cover shield.



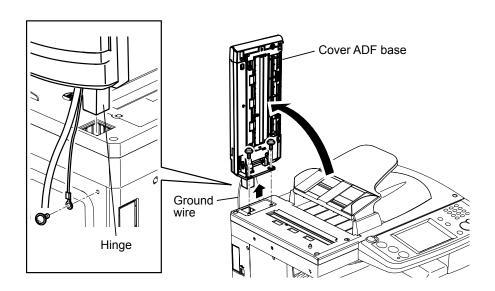
# COVER PLATEN (MFX-2050/1450 only)

- 1) Remove the Cover connect. (See page 5-6)
- 2) Open the Cover platen.
- 3) Remove the Ground wire, and then raise the Cover platen.
- 4) Release the locking tab, and then remove the COVER PLATEN.



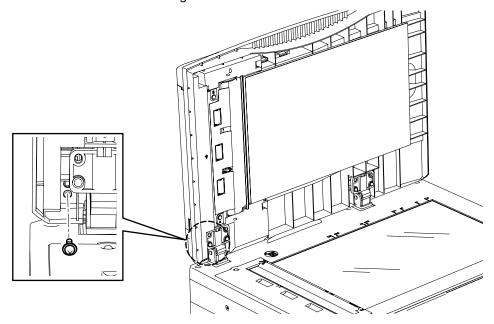
#### **COVER ADF BASE (F-565/525 only)**

- 1) Remove the Cover connect. (See page 5-6)
- 2) Open the Cover ADF base.
- 3) Remove the Ground wire, and then remove two Hinge mounting screws.
- 4) Remove the COVER ADF BASE.

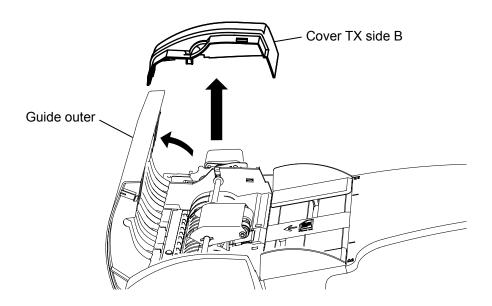


# **COVER TX SIDE B (MFX-2050/1450)**

- 1) Open the Cover platen.
- 2) Remove the Cover TX side B mounting screw.

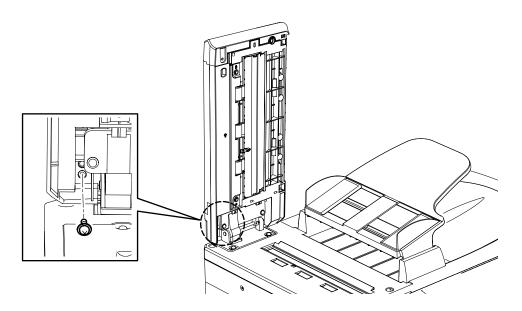


- 3) Close the Cover platen.
- 4) Open the Guide outer.
- 5) Release two locking tabs, and then remove the COVER TX SIDE B.

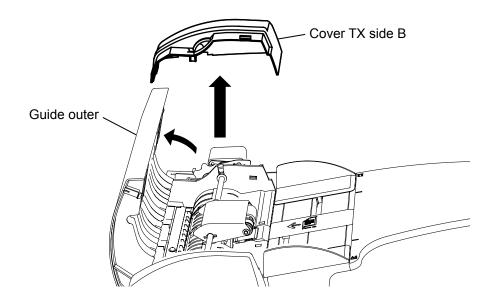


# **COVER TX SIDE B (F-565/525)**

- 1) Open the Cover ADF base.
- 2) Remove the Cover TX side B mounting screw.

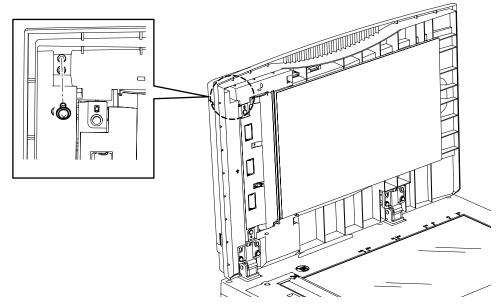


- 3) Close the Cover ADF base.
- 4) Open the Guide outer.
- 5) Release two locking tabs, and then remove the COVER TX SIDE B.

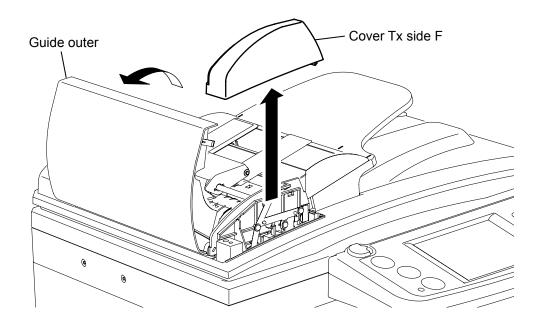


# **COVER TX SIDE F (MFX-2050/1450)**

- 1) Open the Cover platen.
- 2) Remove the Cover TX side F mounting screw.

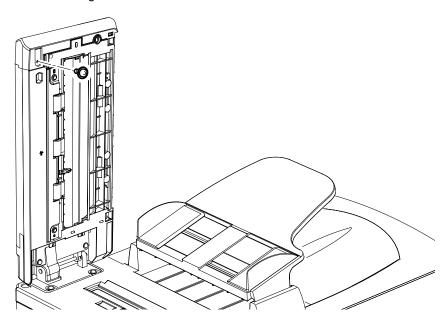


- 3) Close the Cover platen.
- 4) Open the Guide outer.
- 5) Release the locking tab, and then remove the COVER TX SIDE F.

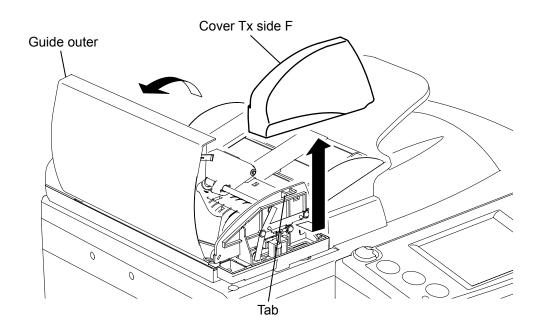


# **COVER TX SIDE F (F-565/525)**

- 1) Open the Cover ADF base.
- 2) Remove the Cover TX side F mounting screw.

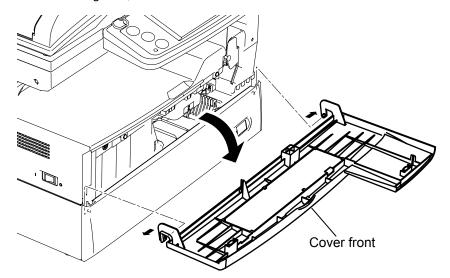


- 3) Close the Cover ADF base.
- 4) Open the Guide outer.
- 5) Release the locking tab, and then remove the COVER TX SIDE  ${\sf F}.$



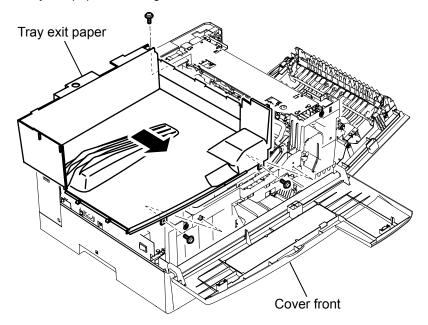
# **COVER FRONT**

- 1) Open the Cover front.
- 2) Release two locking tabs, and then remove the COVER FRONT.



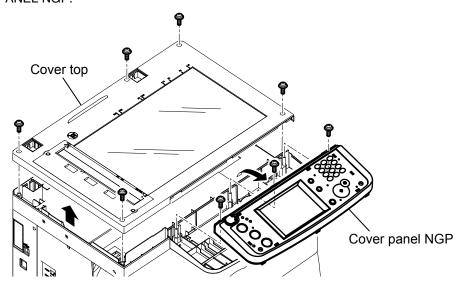
# **TRAY EXIT PAPER**

- 1) Remove the Chassis FBS. (See page 5-33)
- 2) Remove the Cover left.
- 3) Open the Cover front.
- 4) Remove three Tray exit paper mounting screws, and then remove the TRAY EXIT PAPER.



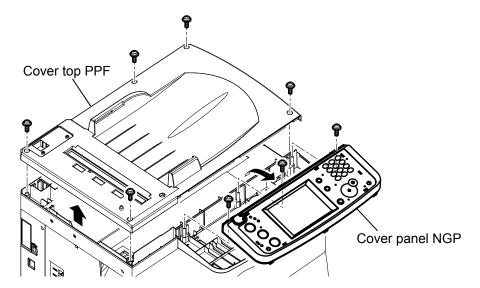
#### COVER PANEL NGP (MFX-2050/1450)

- 1) Remove the Cover platen. (See page 5-7)
- 2) Remove five Cover top mounting screws, and then removes the Cover top.
- 3) Remove three Cover panel NGP mounting screws, then release three locking tabs, and then remove the COVER PANEL NGP.



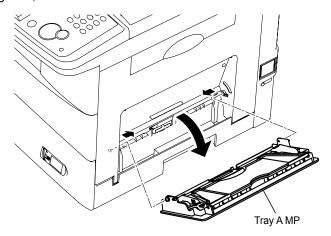
# **COVER PANEL NGP (F-565/525)**

- 1) Remove the Cover ADF base. (See page 5-7)
- 2) Remove five Cover top PPF mounting screws, and then remove the Cover top PPF.
- 3) Remove three Cover panel NGP mounting screws, then release three locking tabs, and then remove the COVER PANEL NGP.

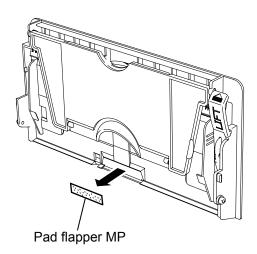


# TRAY A MP/PAD FLAPPER MP

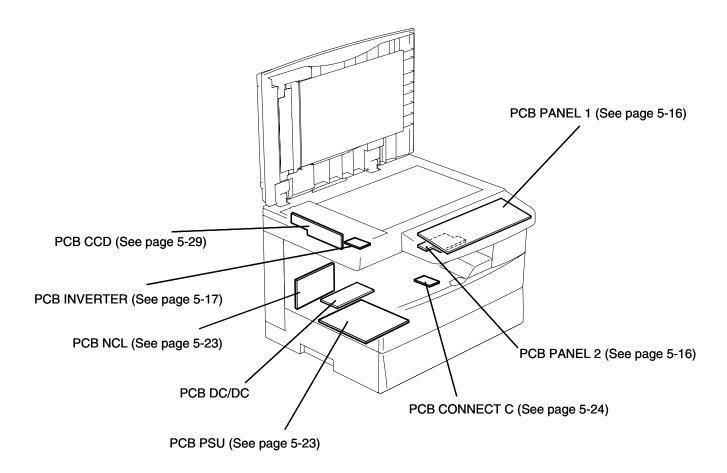
- 1) Open the Tray A MP.
- 2) Release two locking tabs, and then remove the TRAY A MP.

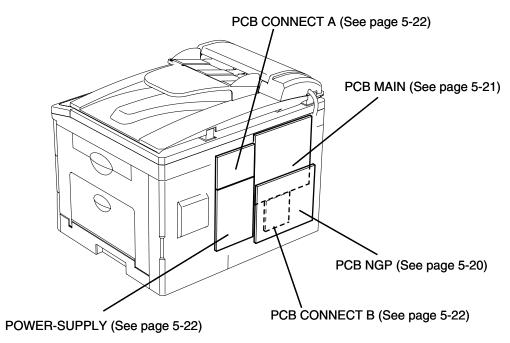


#### 3) Peel off the PAD FLAPPER MP.



# 5.2.2 PCBS

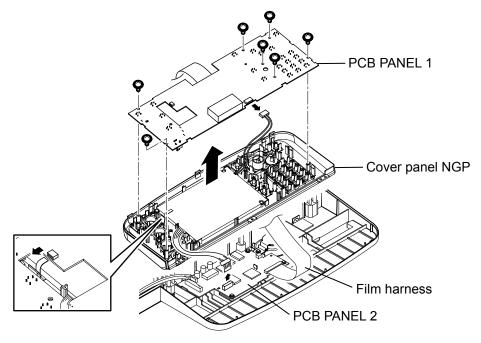




#### **PCB PANEL 1**

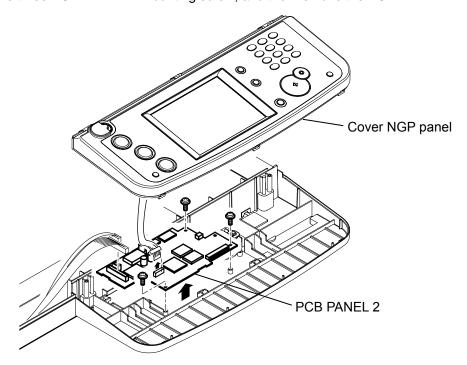
- 1) Remove the Cover platen (MFX-2050/1450) or Cover ADF base (F-565/525). (See page 5-7)
- 2) Remove the Cover panel NGP. (See page 5-13)
- 3) Remove eight PCB PANEL 1 mounting screws, then release six locking tabs.
- 4) Disconnect the connector on the PCB PANEL 2.
- 5) Disconnect the Film harness of the LCD, and then remove the PCB PANEL1.

Note: After removing the PCB PANEL 1, do not turn over the Cover pane NGP. Otherwise the Pin sensor may fall off.



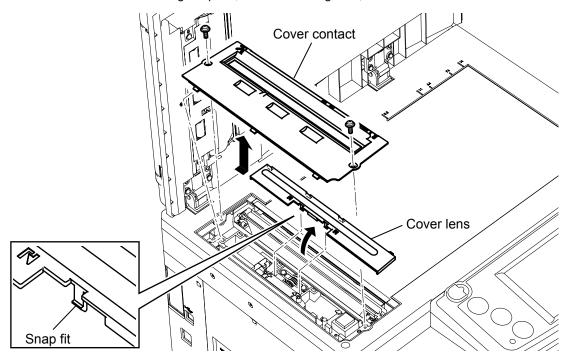
#### **PCB PANEL 2**

- 1) Remove the Cover platen (MFX-2050/1450) or Cover ADF base (F-565/525). (See page 5-7)
- 2) Remove the Cover panel NGP. (See page 5-13)
- 3) Disconnect the connector on the PCB PANEL 2.
- 4) Remove three PCB PANEL 2 mounting screw, and then remove the PCB PANEL 2.

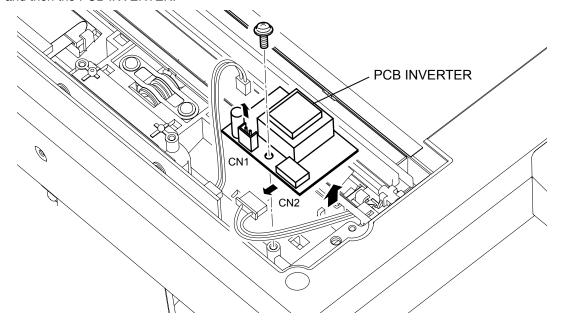


# **PCB INVERTER (MFX-2050/1450)**

- 1) Open the Cover platen.
- 2) Remove two Cover contact mounting screws, then release three locking tabs, and then remove the Cover contact.
- 3) Remove two Cover lens locking snap fits, and four locking tabs, and then remove the Cover lens.

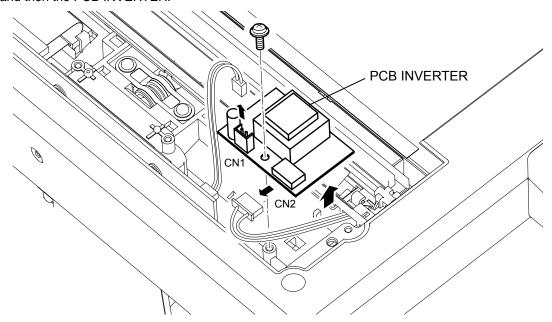


4) Remove the PCB INVERTER mounting screw, then disconnect two connectors and two locking tabs, and then the PCB INVERTER.



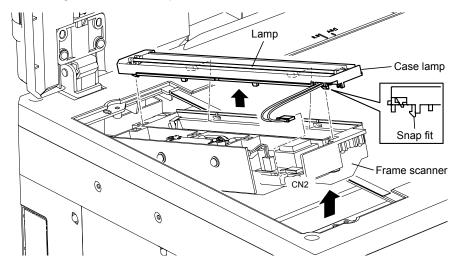
# **PCB INVERTER (F-565/525)**

- 1) Remove the Cover ADF base. (See page 5-7)
- 2) Remove the Cover top PPF. (See page 5-13)
- 3) Remove the Cover lens. (See page 5-19)
- 4) Remove the PCB INVERTER mounting screw, then disconnect two connectors and two locking tabs, and then the PCB INVERTER.



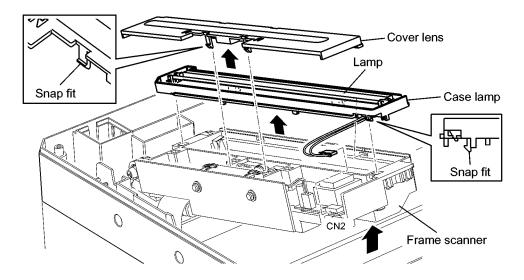
#### LAMP (MFX-2050/1450)

- 1) Remove the Cover contact. (See page 5-17)
- 2) Remove the Cover lens. (See page 5-17)
- 3) Lift the front of the Frame scanner.
- 4) Disconnect the connector for the Lamp on the PCB INVERTER.
- 5) Release two locking tabs and two snap fits, and then remove the LAMP.



#### LAMP (F-565/525)

- 1) Remove the Cover ADF base. (See page 5-7)
- 2) Remove the Cover top PPF. (See page 5-13)
- 3) Remove the Cover lens.
- 4) Lift the front of the Frame scanner.
- 5) Disconnect the connector for the Lamp on the PCB INVERTER.
- 6) Release two locking tabs and two snap fits, and then remove the LAMP.

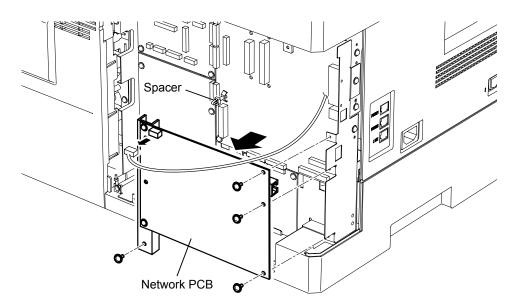


#### **PCB NGP**

When replacing the PCB NGP, first make a backup of your network setting. See page 3-139, "3.24.2 Export / Import the network setting" for detail. (Attach a compact flash memory card on the PCB NGP. Press <Setting>, <\*>, <4>, <4>, [Export Server Data] and then [Enter].)

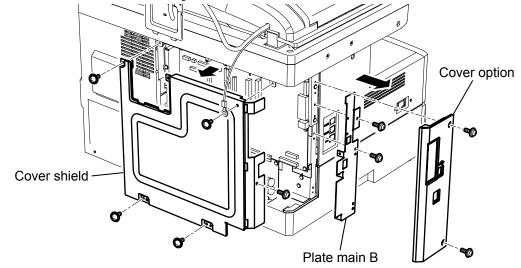
- 1) Remove the Cover connect and disconnect the connector. (See page 5-6)
- 2) Remove two Cover option mounting screw, and then remove the Cover option. (See page 5-21)
- 3) Remove four Cover shield mounting screw, and then remove the Cover shield. (See page 5-21)
- 4) Disconnect the connector on the PCB NGP.
- 5) Remove four PCB NGP mounting screws as shown below.
- 6) Release the Spacer, and then PCB NGP.

After the PCB NGP is replaced, reinstall the network setting. See page 3-139, "3.24.2 Export / Import the network setting" for detail. (Attach the compact flash memory card on the PCB NGP. Press <Setting>, <\*>, <2>, <4>, [Import Server Data] and then [Enter].)

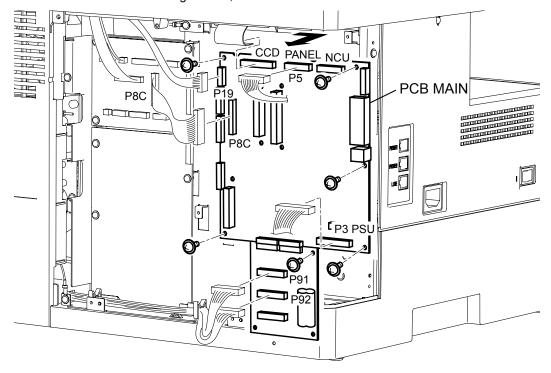


#### **PCB MAIN**

- 1) Remove the Cover connect and disconnect the connector. (See page 5-6)
- 2) Remove two Cover option mounting screw, and then remove the Cover option.
- 3) Remove four Cover shield mounting screw, and then remove the Cover shield.
- 4) Disconnect the connector on the PCB NGP. (See page 5-20)
- 5) Remove four PCB NGP mounting screws as shown below. (See page 5-20)
- 6) Remove the Plate main B mounting screws, and then remove the Plate main B.



- 7) Release the Spacer, and then PCB NGP. (See page 5-20)
- 8) Disconnect all connectors on the PCB MAIN.
- 9) Remove six PCB MAIN mounting screws, and then remove PCB MAIN.

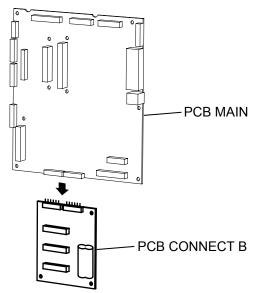


**Note:** The DRAM back-up battery is connected to the PCB MAIN. When the PCB MAIN and PCB Connect B are disconnected, the back-up will be lost.

**Note:** Turning parameters for Color(R,G,B) and Gray mode are stored in the EEPROM(IC42). When the PCB MAIN is replaced, the EEPROM on malfunction PCB should be replaced to the new PCB.

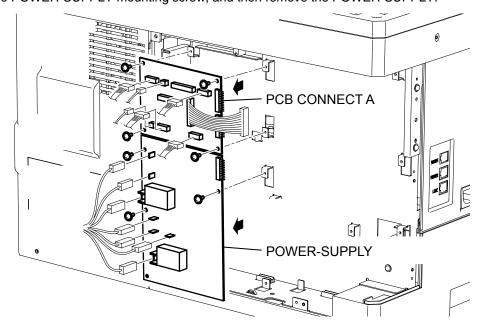
#### **PCB CONNECT B**

- 1) Remove the PCB MAIN. (See page 5-21)
- 2) Separate the PCB CONNECT B.



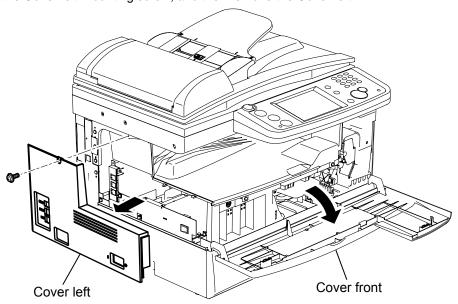
#### **PCB CONNECT A / POWER-SUPPLY**

- 1) Remove PCB NGP. (See page 5-20)
- 2) Remove the PCB MAIN. (See page 5-21)
- 3) Disconnect seven connectors on the PCB CONNECT A.
- 4) Remove four PCB CONNECT A mounting screws, and then remove the PCB CONNECT A.
- 5) Disconnect seven connectors on the POWER-SUPPLY.
- 6) Remove three POWER-SUPPLY mounting screw, and then remove the POWER-SUPPLY.

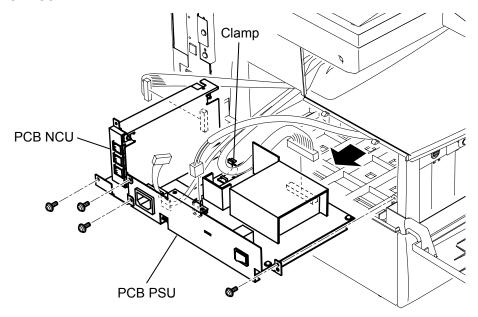


# PCB PSU / PCB NCU

- 1) Remove the Cover option. (See page 5-21)
- 2) Open the Cover front.
- 3) Remove the Cover left mounting screw, and then remove the Cover left.

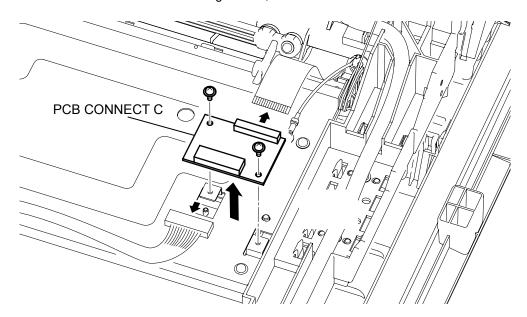


- 4) Remove four PCB NCU mounting screws.
- 5) Disconnect the connector and then remove the PCB NCU.
- 6) Disconnect two connectors.
- 7) Remove the harness from cord clamp.
- 8) Remove the PCB PSU.



# **PCB CONNECT C**

- 1) Remove the Chassis FBS. (See page 5-33)
- 2) Remove the Tray exit paper. (See page 5-12)
- 3) Disconnect the connector and the Film harness.
- 4) Remove two PCB CONNECT C mounting screws, and then remove the PCB CONNECT C.

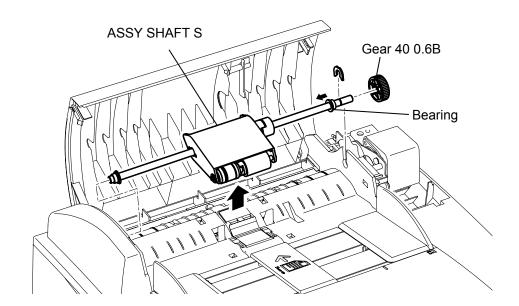


# **5.2.3 SCANNING SECTION**

#### **ROLLER SEPARATOR**

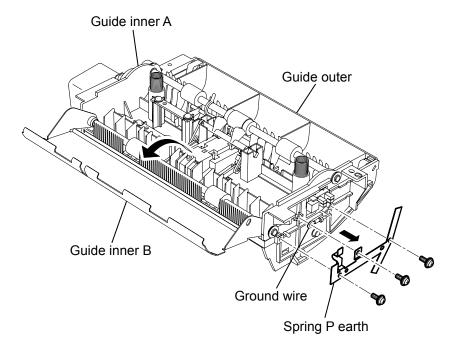
- 1) Remove the Cover TX side B. (See page 5-8)
- 2) Remove one plastic ring.
- 3) Slide the bearing as shown below.
- 4) Remove the Gear 40 0.6B.
- 5) Remove the Shaft separator and then remove the ROLLER SEPARATOR.

Note: When removing the Roller separator, be careful not to lose the plastic ring.

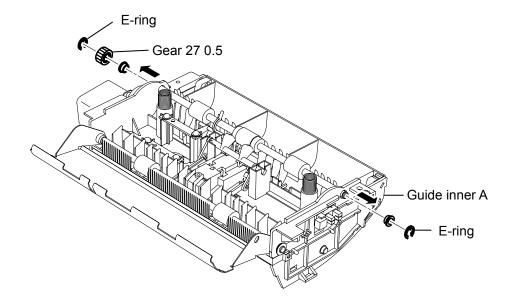


### **ROLLER FEED**

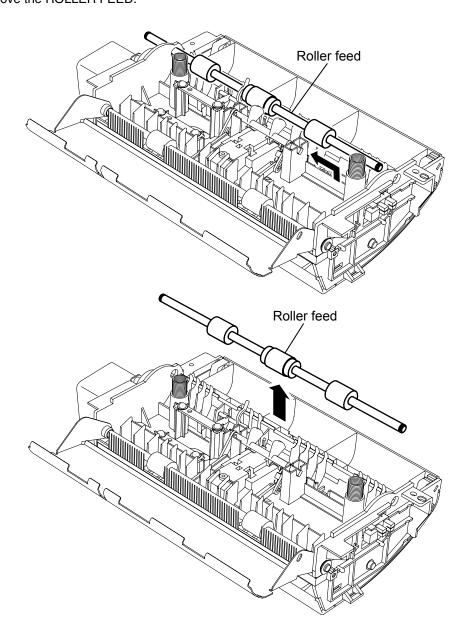
- 1) Remove the Guide inner A. (See page 5-36)
- 2) Remove three Spring P earth mounting screws, and then remove the Spring P earth.
- 3) Open the Guide inner B.



4) Remove two E-rings and then remove the Gear 27 0.5 and two bearings.

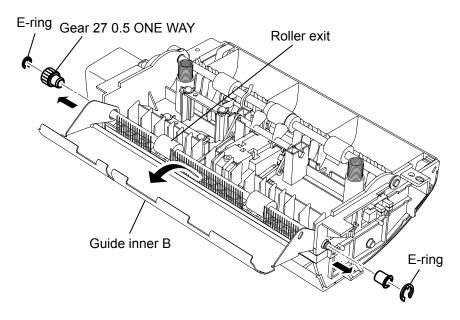


5) Lift the Roller feed and slide out as shown below. Then remove the ROLLER FEED.

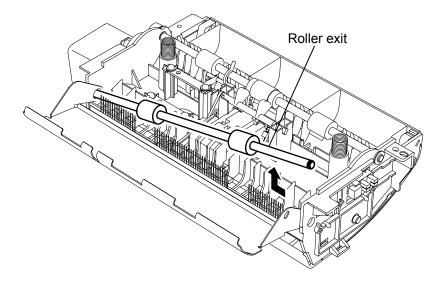


# **ROLLER EXIT**

- 1) Remove the Guide inner A. (See page 5-36)
- 2) Remove the Spring P earth. (See page 5-26)
- 3) Open the Guide inner B.
- 4) Remove two E-rings and then remove the Gear 27 0.5 ONE WAY and one bearing.

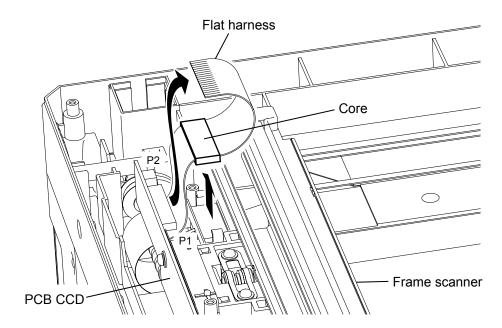


5) Slide out the ROLLER EXIT.

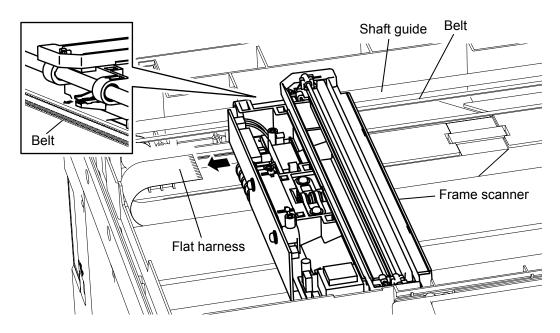


#### **FRAME SCANNER (MFX-2050/1450)**

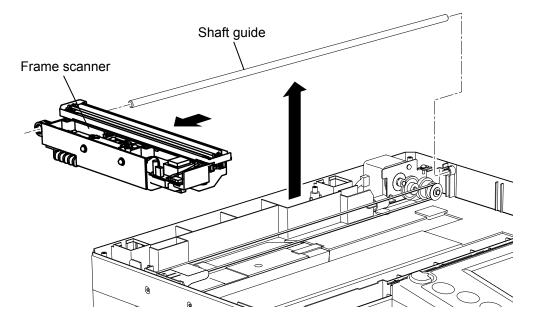
- 1) Remove Cover platen. (See page 5-7)
- 2) Remove the Cover top. (See page 5-13)
- 3) Remove the Cover lens. (See page 5-17)
- 4) Disconnect the Flat harness from the connector P1 on the PCB CCD.
- 5) Release two locking tabs, and then remove the Core.



- 6) Disconnect the Flat harness on the Frame scanner.
- 7) Remove the belt from the Frame scanner.

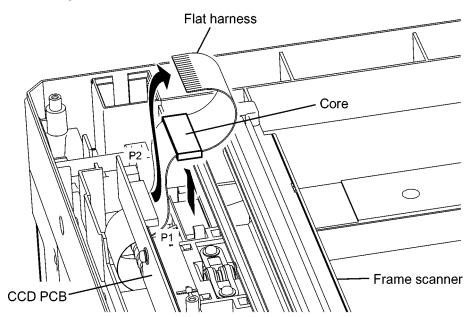


8) Slide out the Shaft guide as shown below. Then remove the FRAME SCANNER.

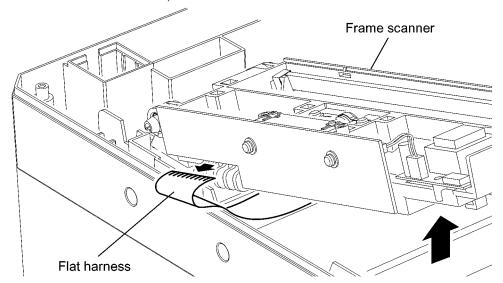


# FRAME SCANNER (F-565/525)

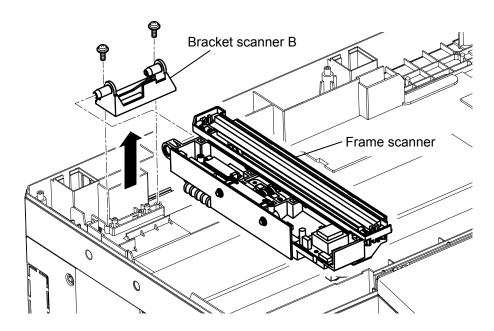
- 1) Remove the Cover ADF base. (See page 5-7)
- 2) Remove the Cover top PPF. (See page 5-13)
- 3) Remove the Cover lens. (See page 5-19)
- 4) Disconnect the Flat harness from the connector P1 on the PCB CCD.
- 5) Release two locking tabs, and then remove the Core.



6) Lift the front of the Frame scanner, and then disconnect the Flat harness on the Frame scanner.

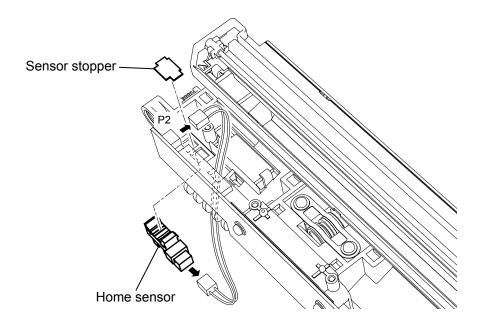


- 7) Remove two Bracket scanner B mounting screws, and then remove the Bracket scanner B.
- 8) Slide out the Bracket scanner B as shown below. Then remove the FRAME SCANNER.



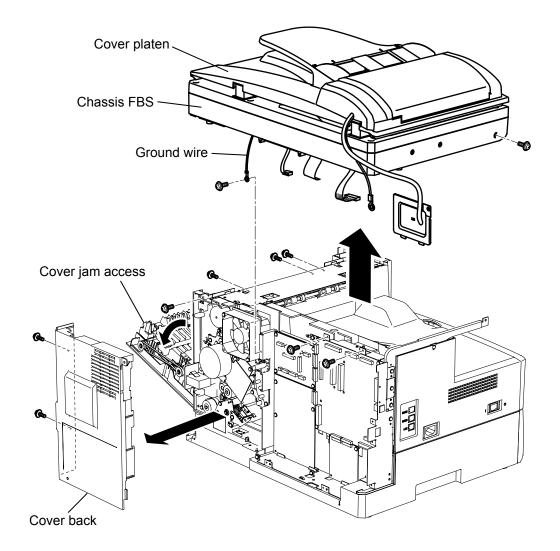
# HOME SENSOR (HS) (MFX-2050/1450 only)

- 1) Remove the Cover platen. (See page 5-7)
- 2) Remove the Cover top. (See page 5-13)
- 3) Remove the Frame scanner. (See page 5-29)
- 4) Remove the Sensor stopper.
- 5) Remove the tab, and then remove the HOME SENSOR.



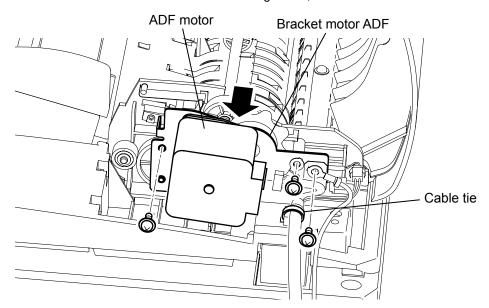
#### **CHASSIS FBS**

- 1) Remove the Cover connect. (See page 5-6)
- 2) Remove the Cover option. (See page 5-21)
- 3) Remove the Cover shield. (See page 5-21)
- 4) Remove two Cover back mounting screws, and then remove Cover back.
- 5) Open the Cover jam access.
- 6) Disconnect three connectors and remove the Ground wire.
- 7) Remove seven Chassis FBS mounting screws, and then remove the CHASSIS FBS.

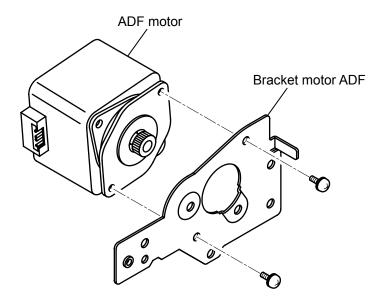


# **ADF MOTOR**

- 1) Remove the Cover TX side B. (See page 5-8, 5-9)
- 2) Cut the Cable tie.
- 3) Disconnect the connector.
- 4) Remove the three Bracket motor ADF mounting screw, and then remove the Bracket motor ADF.

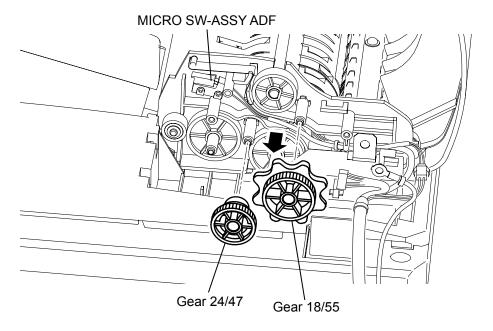


5) Remove two ADF motor mounting screw, and then remove the ADF MOTOR.

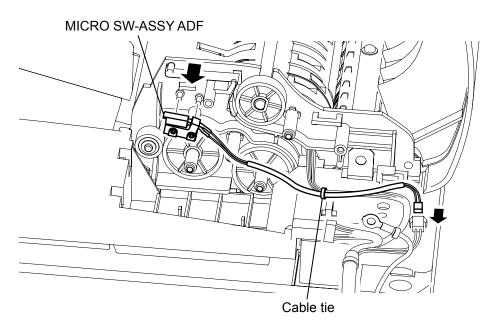


### **MICRO SW-ASSY ADF**

- 1) Remove the cover TX side B. (See page 5-8, 5-9)
- 2) Remove the bracket motor ADF. (See page 5-34)
- 3) Remove the Gear 18/55 and the Gear 24/47.

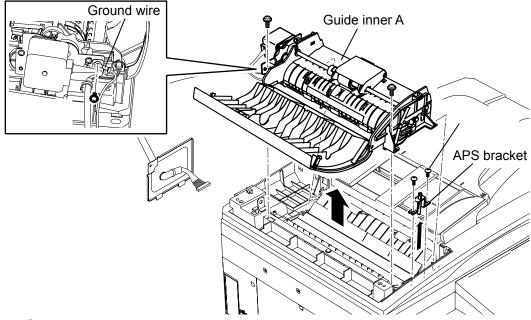


- 4) Cut the Cable tie.
- 5) Disconnect the connector and remove the MICRO SW-ASSY ADF.



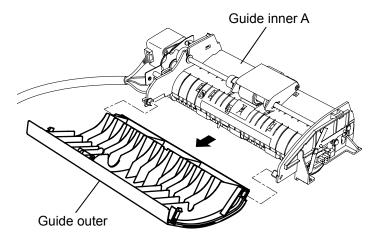
### **GUIDE INNER A**

- 1) Remove the Cover TX side F. (See page 5-10, 5-11)
- 2) Remove the Cover TX side B. (See page 5-8, 5-9)
- 3) Remove the Ground wire as shown below.
- 4) Remove two APS bracket mounting screw and then remove the APS bracket.
- 5) Remove two Guide inner A mounting screw and the tab, and then remove the GUIDE INNER A.



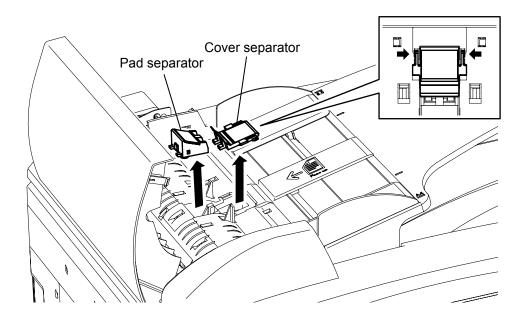
### **GUIDE OUTER**

- 1) Remove the Cover TX side F. (See page 5-10, 5-11)
- 2) Remove the Cover TX side B. (See page 5-8, 5-9)
- 3) Remove the Guide inner A.
- 4) Remove the GUIDE OUTER.



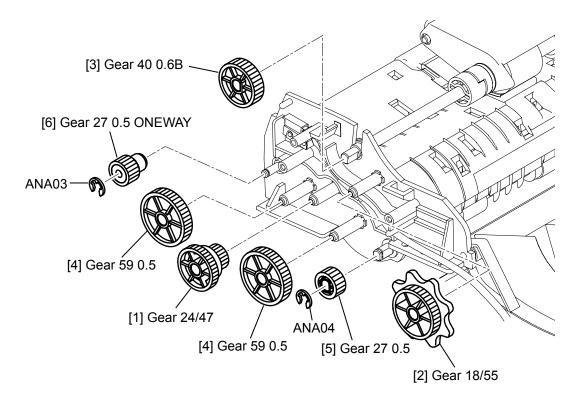
# **PAD SEPARATOR**

- 1) Remove the Cover TX side B. (See page 5-8, 5-9)
- 2) Remove the Roller separator. (See page 5-25)
- 3) Release two locking tabs, and then remove the Cover separator.
- 4) Remove the PAD SEPARATOR.



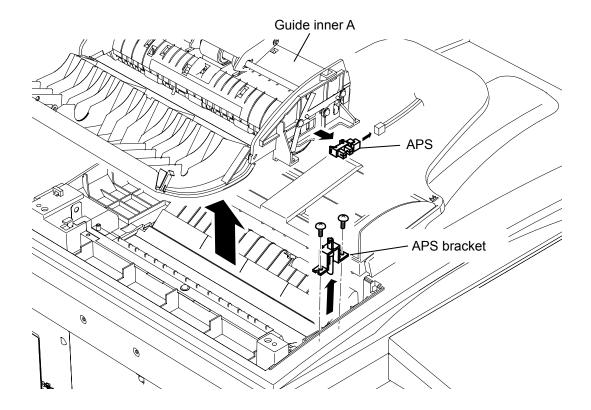
### **ADF DRIVE GEARS**

- 1) Remove the Cover TX side F. (See page 5-10, 5-11)
- 2) Remove the Cover TX side B. (See page 5-8, 5-9)
- 3) Remove the Bracket motor ADF. (See page 5-34)
- 4) Remove the APS bracket. (See page 5-39)
- 5) Remove the Guide inner A. (See page 5-36)
- 6) [1] Remove the Gear 24/47.
- 7) [2] Remove the Gear 18/55.
- 8) [3] Remove the Gear 40 0.6B.
- 9) [4] Remove two Gear 59 0.5.
- 10) Remove one E-ring, and then remove [5] the Gear 27 0.5.
- 11) Remove one E-ring, and then remove [6] the Gear 27 0.5 ONEWAY.



# **ADF PERMIT SENSOR (APS)**

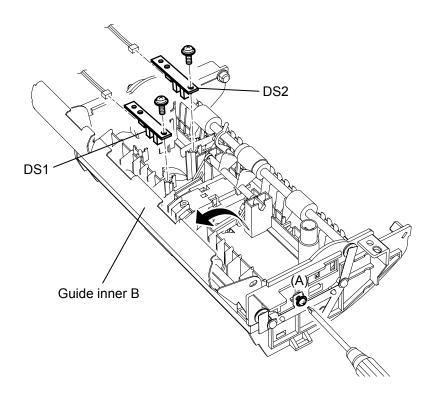
- 1) Remove the Cover TX side F. (See pages 5-10, 5-11)
- 2) Remove the Cover TX side B. (See pages 5-8, 5-9)
- 3) Remove the Bracket motor ADF mounting screw. (See page 5-34)
- 4) Remove two APS bracket mounting screws, and then remove the APS bracket.
- 5) Remove the Guide inner A. (See page 5-36)
- 6) Disconnect the connector on the APS and remove the SENSOR (APS).



### SENSOR DS1/DS2

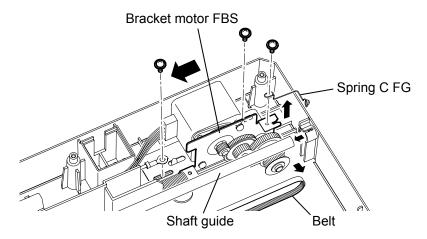
- 1) Remove the Guide inner A. (See page 5-36)
- 2) Loosen the Guide inner B mounting screw (A) and open the Guide inner B.
- 3) Remove the DS1 mounting screw and disconnect the connector on the DS1, then remove the DS1.
- 4) Remove the DS2 mounting screw and disconnect the connector on the DS2, then remove the DS2.

Note: When reattaching the parts, close the Guide inner B first and then tighten up the mounting screw (A).

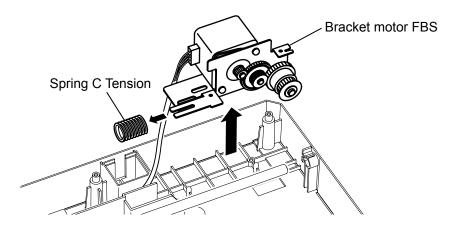


### **FBS MOTOR (MFX-2050/1450 only)**

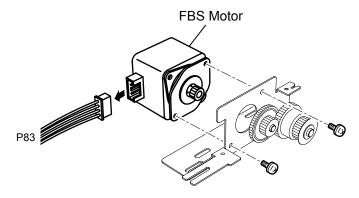
- 1) Remove the Cover platen. (See page 5-7)
- 2) Remove the Cover top. (See page 5-13)
- 3) Remove three Bracket motor FBS mounting screws.
- 4) Remove the Shaft guide, and then remove the spring C FG.
- 5) Slide the Bracket motor FBS, and then remove the belt.



6) Remove the Spring C tension, and then remove the Bracket motor FBS.

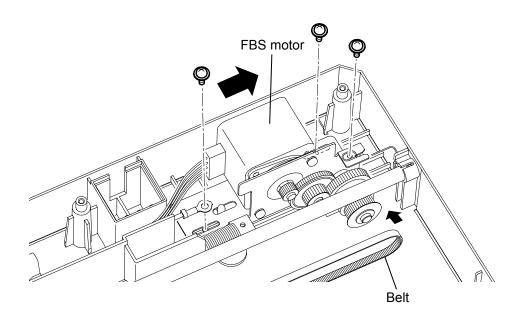


7) Remove two FBS motor mounting screw and disconnect the harness, and then remove the FBS MOTOR.



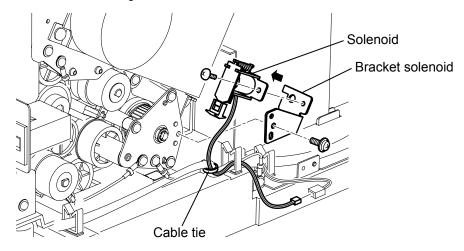
# ASSEMBLING THE FBS MOTOR (MFX-2050/1450 only)

- 1) Temporarily tighten the three Bracket motor FBS screws.
- 2) Attach the belt in position.
- 3) Tighten up the above three screws.



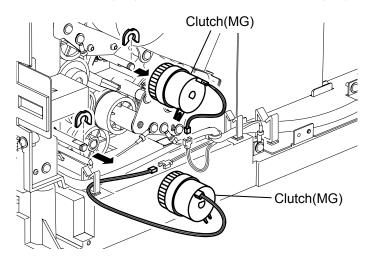
# 5.2.4 PRINTER SECTION SOLENOID

- 1) Remove the Cover option. (See page 5-21)
- 2) Remove the Cover shield. (See page 5-21)
- 3) Remove the Cover back. (See page 5-33)
- 4) Remove the Bracket solenoid mounting screw, and then remove the Bracket solenoid.
- 5) Cut the Cable tie, and disconnect the connector.
- 6) Remove the Solenoid mounting screw, and then remove the SOLENOID.



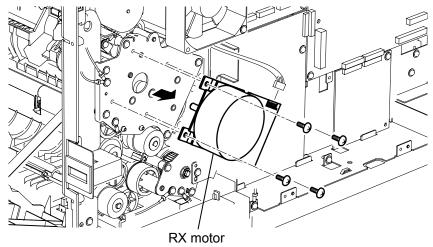
### **CLUTCH (MG)**

- 1) Remove the Cover option. (See page 5-21)
- 2) Remove the Cover shield. (See page 5-21)
- 3) Remove the Cover back. (See page 5-33)
- 4) Remove two plastic rings.
- 5) Disconnect the connector of Clutch (MG), and then remove the CLUTCH (MG).



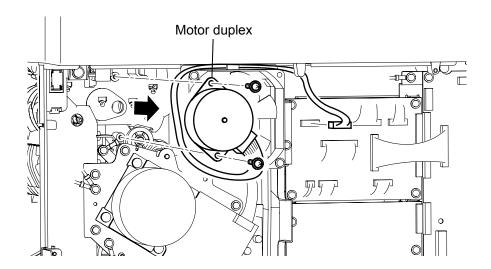
### **RX MOTOR**

- 1) Remove the Cover option. (See page 5-21)
- 2) Remove the Cover shield. (See page 5-21)
- 3) Remove the Cover back. (See page 5-33)
- 4) Remove four RX motor mounting screws and disconnect the connector, and then remove the RX MOTOR.



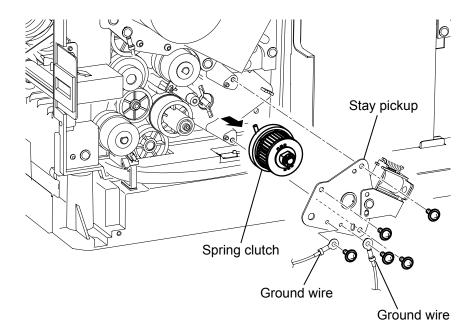
### **MOTOR DUPLEX**

- 1) Remove the Cover option. (See page 5-21)
- 2) Remove the Cover shield. (See page 5-21)
- 3) Remove the Cover back. (See page 5-33)
- 4) Remove two Motor duplex mounting screws and disconnect the connector, and then remove the MOTOR DUPLEX.



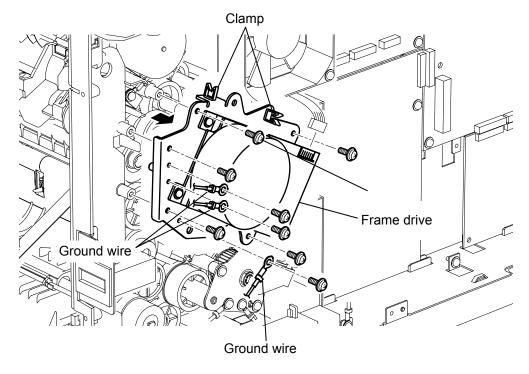
### **SPRING CLUTCH**

- 1) Remove the Cover option. (See page 5-21)
- 2) Remove the Cover shield. (See page 5-21)
- 3) Remove the Cover back. (See page 5-33)
- 4) Remove two Ground wire mounting screw, and then remove the Ground wire.
- 5) Remove three Stay pickup mounting screw, and then remove the stay pickup.
- 6) Remove the SPRING CLUTCH.

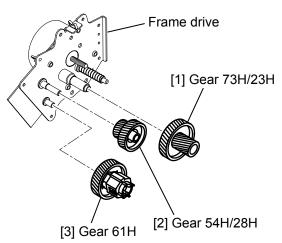


### FRAME DRIVE GEARS

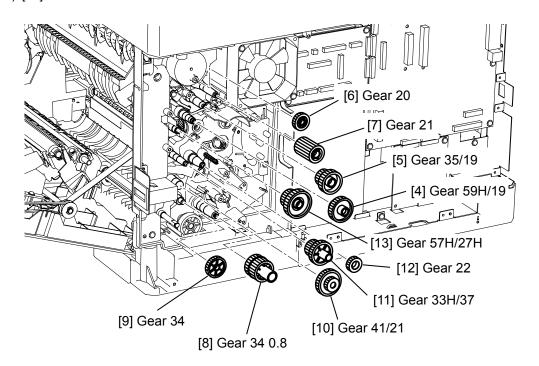
- 1) Remove the Cover option. (See page 5-21)
- 2) Remove the Cover shield. (See page 5-21)
- 3) Remove the Cover back. (See page 5-33)
- 4) Remove three Ground wires.
- 5) Remove five Frame drive mounting screws, and then pull out the Frame drive.
- 6) Remove the harness from two clamps, and disconnect the connector on RX motor.
- 7) Remove the FRAME DRIVE.



- 8) [1] Remove the Gear 73H/27H.
- 9) [2] Remove the Gear 54H/28H.
- 10) [3] Remove the Gear 61H.

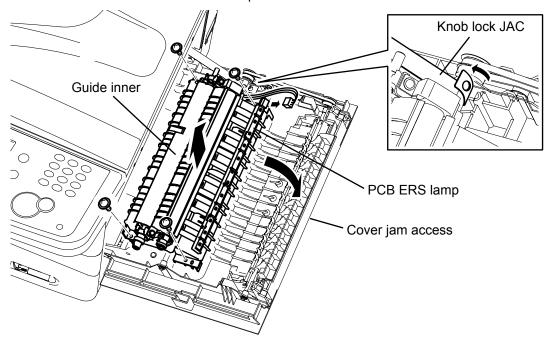


- 11) Remove the Spring clutch. (See page 5-45)
- 12) Remove the Clutch (MG). (See page 5-43)
- 13) Remove the Motor duplex.
- 14) [4] Remove the Gear 59H/19.
- 15) [5] Remove the Gear 35/19.
- 16) [6] Remove the Gear 20.
- 17) [7] Remove the Gear 21.
- 18) [8] Remove the Gear 34 0.8.
- 19) [9] Remove the Gear 34 (D88-30160-61).
- 20) [10] Remove the Gear 41/21.
- 21) [11] Remove the Gear 33H/37.
- 22) [12] Remove the Gear 22.
- 23) [13] Remove the Gear 57H/27H.

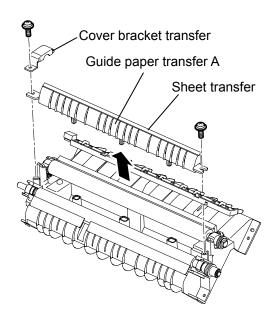


### **ROLLER TRANSFER**

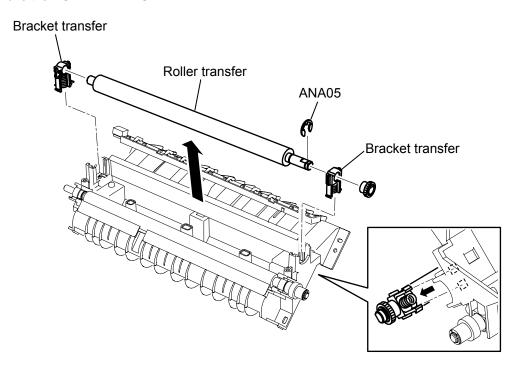
- 1) Open the Cover jam access.
- 2) Remove the Knob lock JAC.
- 3) Remove four Guide inner mounting screws, and then remove the Guide inner.
- 4) Disconnect the connector of PCB ERS lamp.



5) Remove two Guide paper transfer A mounting screws, and then the Cover bracket transfer and Guide paper transfer A.

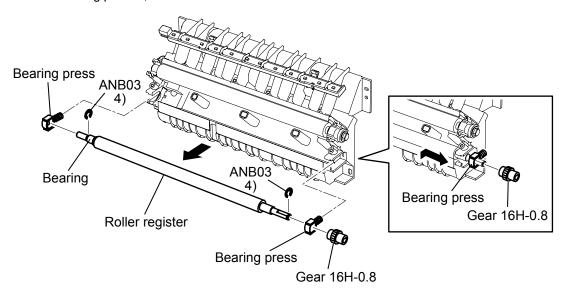


- 6) Remove the two Bracket transfer tabs from the back of the Guide inner.
- 7) Remove the ROLLER TRANSFER.



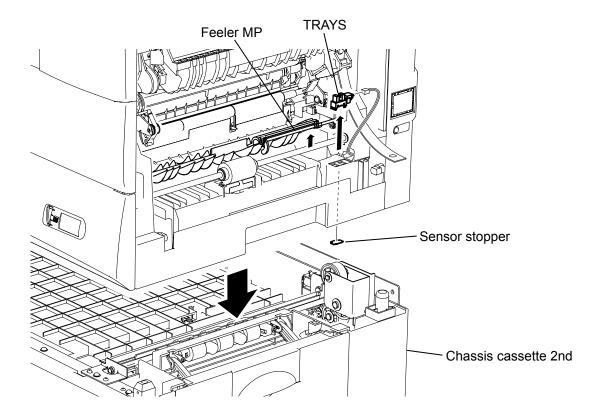
### **ROLLER REGISTER**

- 1) Open the Cover jam access.
- 2) Remove the Knob lock JAC. (See page 5-48)
- 3) Remove the Guide inner. (See page 5-48)
- 4) Remove two E-rings, and then remove the Gear 16H-0.8.
- 5) Hold the Bearing press's, and slide and remove the ROLLER REGISTER.



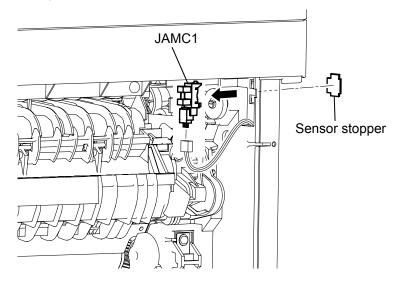
### **SENSOR TRAYS**

- 1) Remove the Cover jam access.
- 2) Separate the Chassis cassette 2nd from the body, and remove the Sensor stopper from behind.
- 3) Remove the Sensor TRAYS while pulling up the Feeler MP.



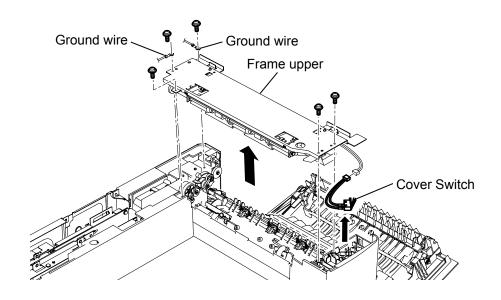
### **SENSOR JAMC1**

- 1) Remove the Cover option. (See page 5-21)
- 2) Remove the Cover shield. (See page 5-21)
- 3) Remove the Cover back. (See page 5-33)
- 4) Open the Cover jam access.
- 5) Release the tab, and then remove the Sensor JAMC1.



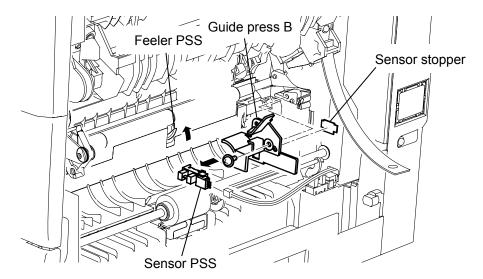
### **COVER SWITCH**

- 1) Remove the Chassis FBS. (See page 5-33)
- 2) Open the Cover jam access.
- 3) Remove five Frame upper mounting screws, and then remove the Frame upper.
- 4) Disconnect the connector of Sensor interlock, and then remove the Cover Switch.



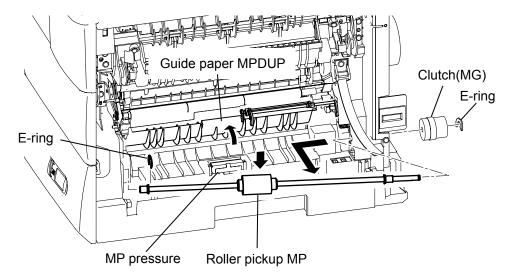
### **SENSOR PSS**

- 1) Remove the Cover jam access.
- 2) Remove the Guide press B mounting screw, and then remove Guide press B while pulling up the Feeler PSS.
- 3) Release the tab, and then remove the SENSOR PSS.



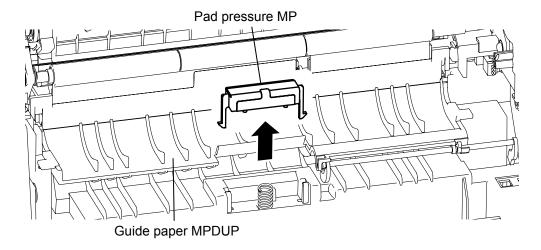
### **ROLLER PICKUP MP / PAD PRESSURE MP**

- 1) Remove the Clutch (MG) (See page 5-43)
- 2) Remove the Cover jam access.
- 3) Remove two E-rings.
- 4) Lift the Guide paper MPDUP and press down the MP pressure.
- 5) Slide the ROLLER PICKUP MP to the left and remove.



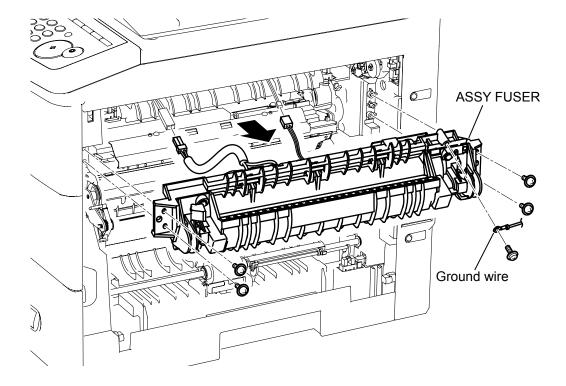
6) Remove the PAD PRESSURE MP.

Note: When reattaching the Pad pressure MP, align the notch with the counterpart on the body.



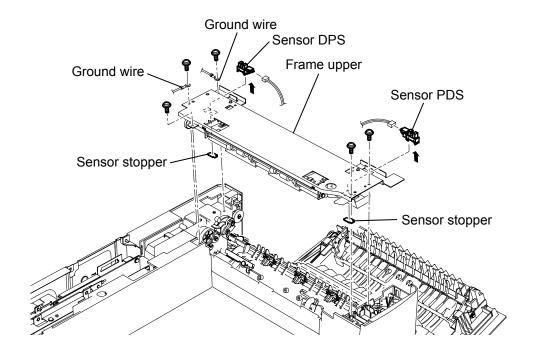
### **ASSY FUSER**

- 1) Open the Cover jam access.
- 2) Remove the Ground wire and four Printer fuser mounting screws, and then remove the harness.
- 3) Remove the ASSY FUSER.



### **SENSOR PDS / DPS**

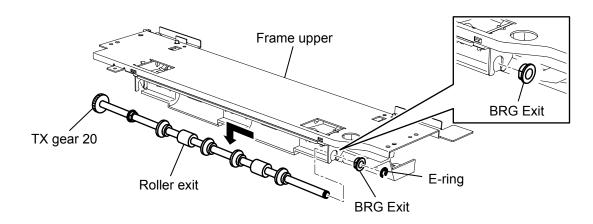
- 1) Remove the Chassis FBS. (See page 5-33)
- 2) Remove five Frame upper mounting screws, and then remove the Frame upper.
- 3) Remove the Sensor stopper and disconnect the connector, and then remove the SENSOR PDS/DPS.



### **ROLLER EXIT**

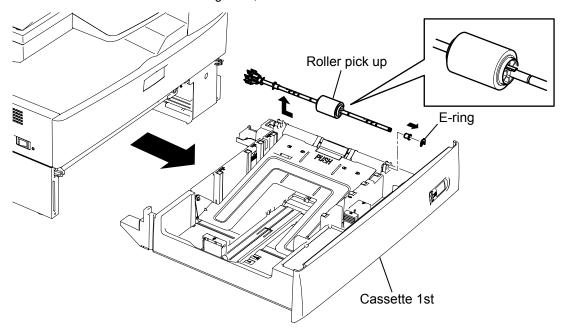
- 1) Remove the Chassis FBS. (See page 5-33)
- 2) Remove the Frame upper.
- 3) Remove one E-ring, and then remove the BRG exit.
- 4) Slide out the ROLLER EXIT.

Note: When reattaching the BRG exit, align its cutout with the cutout of the Frame upper's holder.



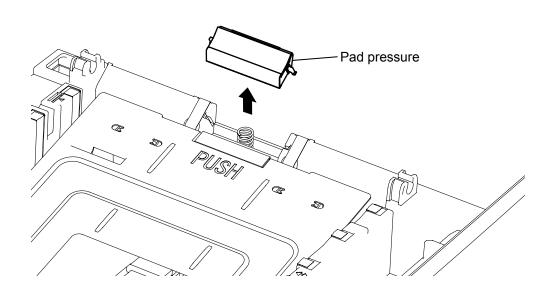
# ROLLER PICK UP (1st CST) / (2nd CST)

- 1) Pull out the Cassette 1st.
- 2) Remove one plastic ring and bearing.
- 3) Release the roller tab from the shaft groove, and remove the ROLLER PICK UP.



# PAD PRESSURE (1st CST) / (2nd CST)

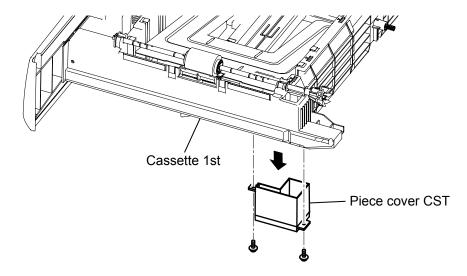
- 1) Remove the Roller pick up.
- 2) Remove the PAD PRESSURE.



# PIECE COVER CST (1st CST Paper dust)

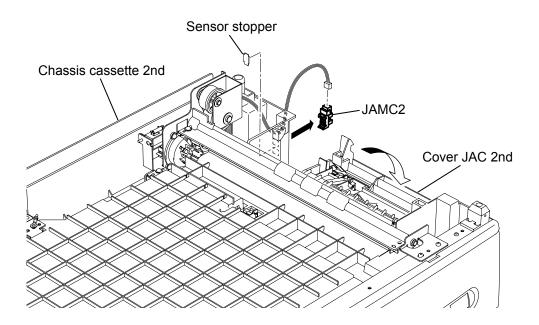
- 1) Pull out the Cassette 1st.
- 2) Remove two Piece cover CST mounting screws, and then remove the PIECE COVER CST.

  Note: Paper dust is collected in the Piece cover CST. When it is full, empty it.



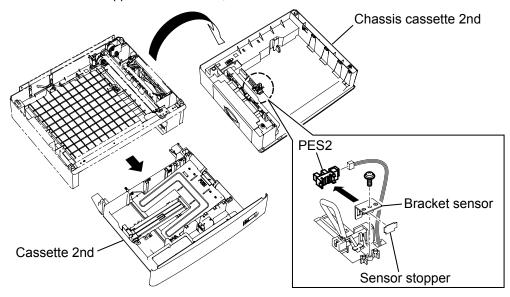
### **SENSOR JAMC2**

- 1) Separate the Chassis 2nd from the Main frame.
- 2) Open the Cover JAC 2nd.
- 3) Remove the Sensor stopper and disconnect the connector, and then remove the Sensor JAMC2.



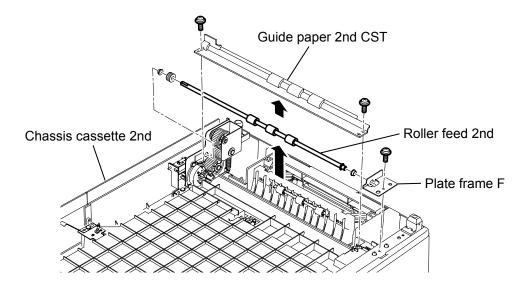
### **SENSOR PES2**

- 1) Separate the Chassis cassette 2nd from the Main frame.
- 2) Pull out the Cassette 2nd.
- 3) Turn over the Chassis cassette 2nd.
- 4) Remove the Bracket sensor mounting screw, and then remove the Bracket sensor.
- 5) Remove the Sensor stopper and connector, and then remove the Sensor PES2.



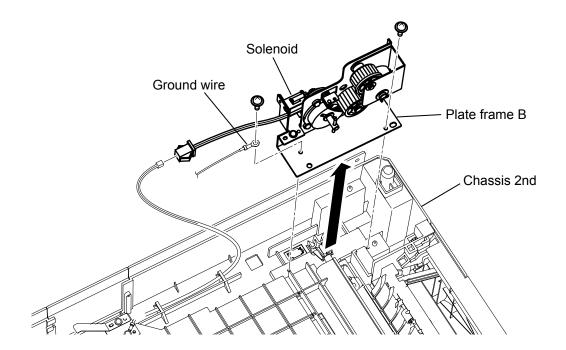
### **ROLLER FEED 2ND (2nd CST)**

- 1) Separate the Chassis cassette 2nd from the Main frame.
- 2) Remove two Guide paper 2nd CST mounting screws, and then remove the Guide paper 2nd CST.
- 3) Remove the Plate frame F mounting screw, and then remove the Plate frame F.
- 4) Remove the ROLLER FEED 2ND.



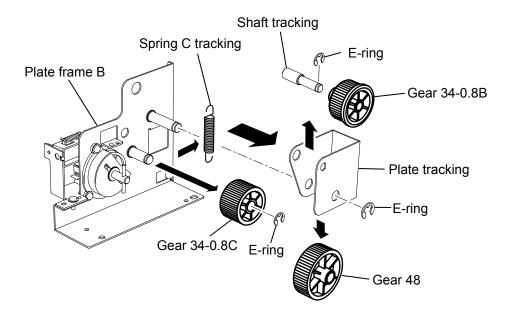
# PLATE FRAME B (2nd CST)

- 1) Separate the Chassis cassette 2nd from the Main frame.
- 2) Pull out the Cassette 2nd.
- 3) Remove the Roller Feed 2ND. (See page 5-57)
- 4) Disconnect the connector of Solenoid.
- 5) Remove two Plate frame B mounting screws, and then remove the PLATE FRAME B.



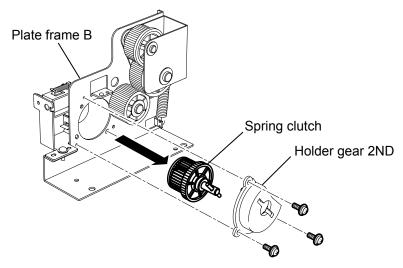
# PLATE FRAME B GEARS (2nd CST)

- 1) Separate the Chassis cassette 2nd from the Main frame.
- 2) Pull out the Cassette 2nd.
- 3) Remove the Roller Feed 2ND. (See page 5-57)
- 4) Remove the Plate frame B. (See page 5-58)
- 5) Remove one E-ring.
- 6) Remove the Spring C tracking.
- 7) Remove the Plate tracking.
- 8) Remove the Gear 48.
- 9) Remove one E-ring and remove the Shaft tracking, and then remove the Gear 34-0.8B.
- 10) Remove one E-ring, and then remove Gear 34-0.8C.



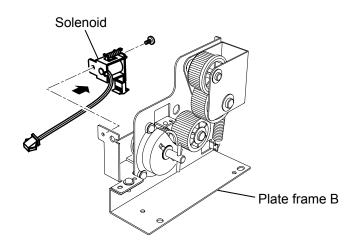
### **SPRING CLUTCH (2nd CST)**

- 1) Separate the Chassis cassette 2nd from the Main frame.
- 2) Pull out the Cassette 2nd.
- 3) Remove the Roller Feed 2ND. (See page 5-57)
- 4) Remove the Plate frame B. (See page 5-58)
- 5) Remove three Holder gear 2ND mounting screws, and then remove the Holder gear 2ND.
- 6) Remove the SPRING CLUTCH.



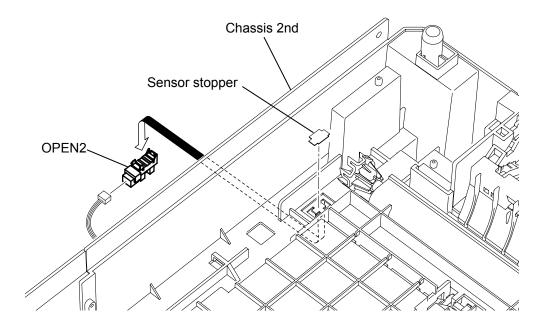
### **SOLENOID (2nd CST)**

- 1) Separate the Chassis cassette 2nd from the Main frame.
- 2) Pull out the Cassette 2nd.
- 3) Remove the Roller feed 2ND. (See page 5-57)
- 4) Remove the Plate frame B. (See page 5-58)
- 5) Remove the Solenoid mounting screw, and then remove the SOLENOID.



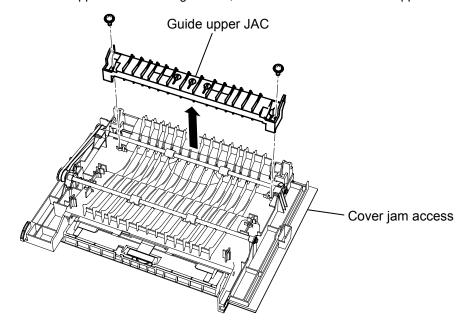
### **SENSOR OPEN2**

- 1) Separate the Chassis cassette 2nd from the Main frame.
- 2) Pull out the Cassette 2nd.
- 3) Remove the Roller feed 2ND. (See page 5-57)
- 4) Remove the Plate frame B. (See page 5-58)
- 5) Release the tab, and then remove the Sensor OPEN2.

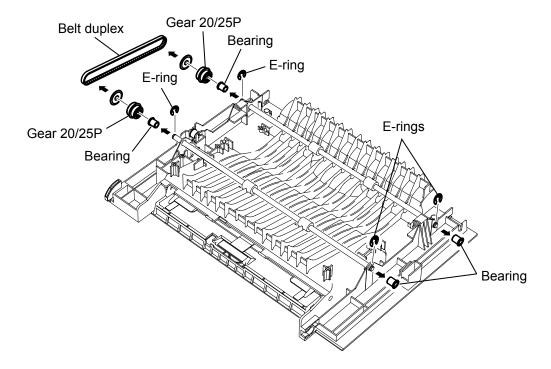


### **ROLLER FEED DUPLEX**

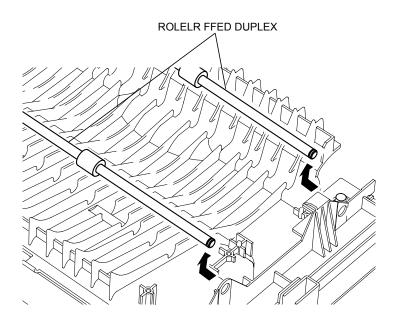
- 1) Remove the Cover jam access.
- 2) Remove the Guide inner. (See page 5-48)
- 3) Remove two Guide upper JAC mounting screws, and then remove the Guide upper JAC.



- 4) Remove the Belt duplex from the Gear 20/25P.
- 5) Remove four E-rings, and then remove the Gear 20/25P.

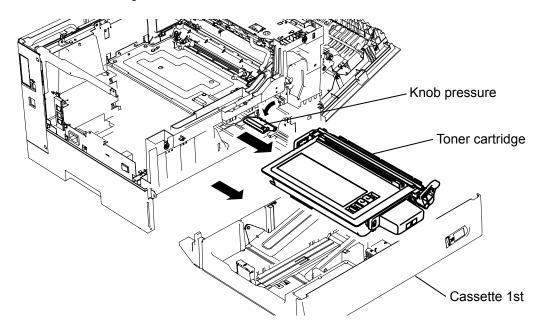


# 6) Remove one bearing, and slide out the ROLLER FEED DUPLEX.

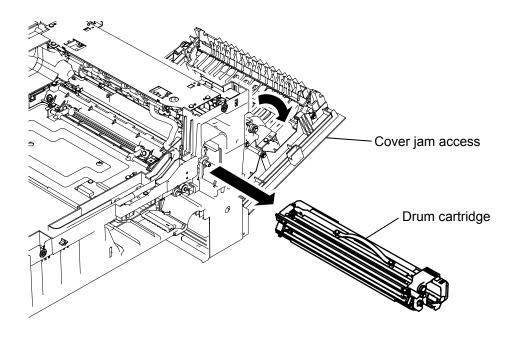


# **TONER SENSOR 1, 2 (TS1, TS2)**

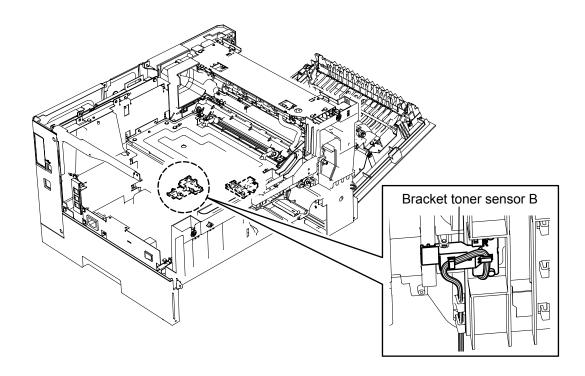
- 1) Remove the Cover front. (See page 5-12)
- 2) Pull out the Cassette 1st.
- 3) Release the Knob pressure.
- 4) Pull out the Toner cartridge.



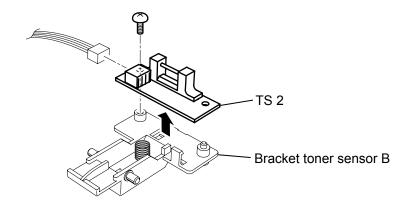
- 5) Open the Cover jam access.
- 6) Pull out Drum cartridge.



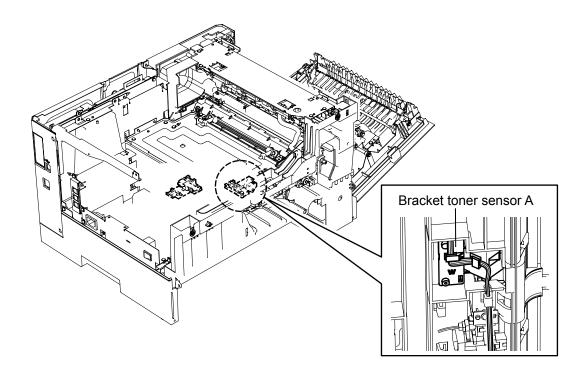
7) Release the locking tab, and then remove the Bracket toner sensor B.



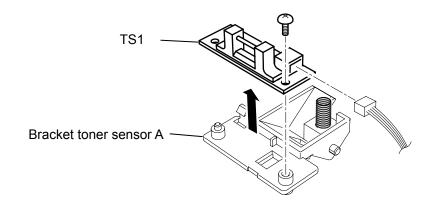
8) Remove the TS2 mounting screw, and then remove the TS2.



9) Release the locking tab, and then remove the Bracket toner sensor A.

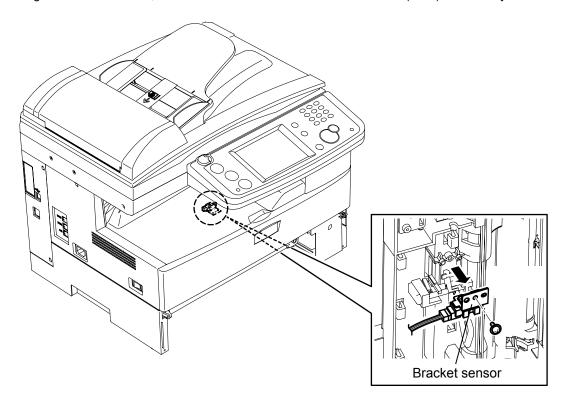


10) Remove the TS1 mounting screw, and then remove the TS1.

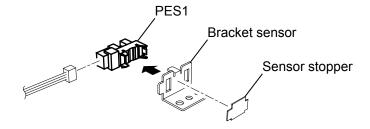


### **SENSOR PES1**

- 1) Pull out the Cassette 1st.
- 2) Using a short screwdriver, remove the Bracket sensor from the bottom (back) of the body.

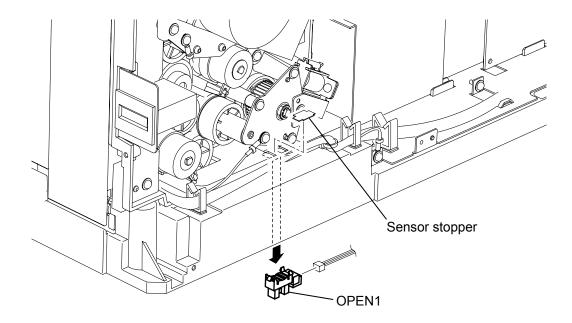


3) Remove the Sensor stopper and connector, and then remove the PES1.



### **SENSOR OPEN1**

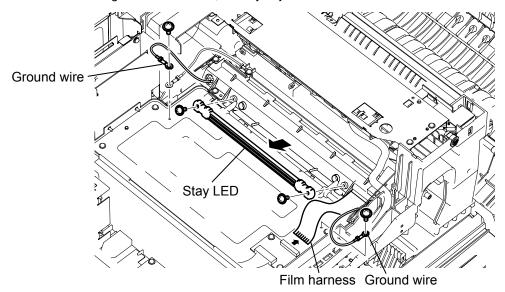
- 1) Remove the Cover option. (See page 5-21)
- 2) Remove the Cover shield. (See page 5-21)
- 3) Remove the Cover back. (See page 5-33)
- 4) Remove the Sensor stopper.
- 5) Disconnect the connector of Sensor, and then remove the Sensor OPEN1.



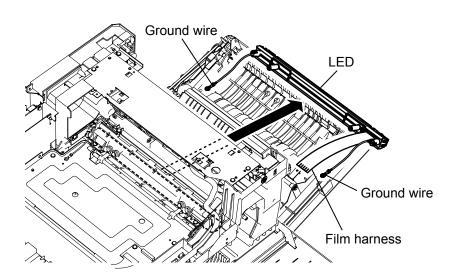
### **LED**

- 1) Remove the Chassis FBS. (See page 5-33)
- 2) Open the Cover jam access.
- 3) Open the Cover front.
- 4) Remove the Cover left.
- 5) Remove the Tray paper exit.
- 6) Remove the Drum cartridge and the case DEV.
- 7) Disconnect the Film harness of the PCB CONNECT C.
- 8) Remove two Ground wires.
- 9) Remove two Stay LED mounting screws, and then remove the Stay LED.

Note: When connecting the Film harness, exactly adjust the Contact side.



### 10) Remove the LED.



# 5.3 Adjustment

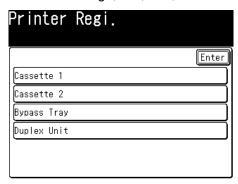
# 5.3.1 Outline of printer registration adjustment

- 1. Adjust the printer registration of the first cassette.
- 2. Adjust the scan position and zoom for ADF and FBS.
- 3. After performing step1 and 2, adjust printer position for each cassette.

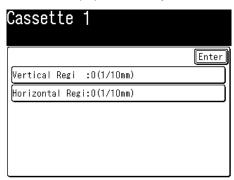
# 5.3.2 Printer registration mode

This mode adjusts the print registration for each paper source.

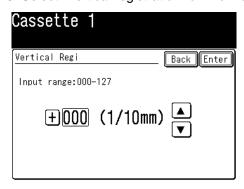
1. Press <Setting>, <\*>, <4>, <3>.



2. Select the paper source you want to adjust.



3. Select "Vertical registration" or "Horizontal registration".



4. Adjust the printer registration:

#### For example:

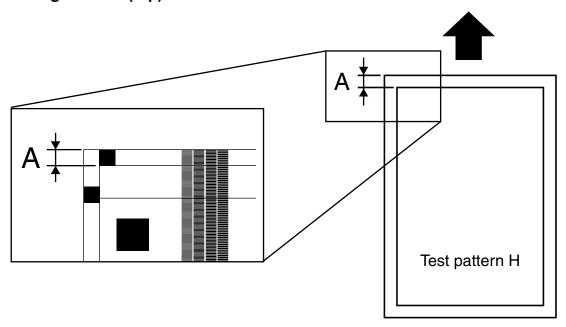
When you set "+12.3" for Vertical registration, the printing image moves 12.3 mm downward. If you set "-12.3", the printing image moves 12.3 mm upward.

When you set "+12.3" for Horizontal registration, the printing image moves 12.3 mm rightward. If you set ""-12.3", the printing image moves 12.3 mm leftward. You can adjust between "-12.7 mm" and "+12.7 mm".

- 5. Press [Enter] to save the settings.
- 6. To return to the standby, press <Reset>.

**Note:** If you adjust the printer registration using this mode, the value entered by the machine parameter will also be overwritten.

#### **Printer registration (top)**



Adjust so that width A on the test pattern Checkered output falls within the following range.

Standard	Adjustment Tool	Setting Range	
10 ± 1.5 (mm)	Machine peremeter: 180, 220	0 to 12.7 (mm)	
	Machine parameter: 180, 220	(0.1 mm step)	
	Machine peremeter: 240	-12.8 to 12.7 (mm)	
	Machine parameter: 240	(0.1 mm step)	

#### Adjustment procedure

- 1. Load legal (for USA version) or A4 (for GBR version) size paper to the cassette or tray you want to adjust.
- 2. Use the Unique Switch 52 to adjust the printing margin to 0 mm. (bit 0,  $1 \rightarrow 0$ )
- 3. Printout the test pattern "Ladder". (Press <Setting> , <\*> , <0> , <9> , [Test Pattern Print] , [Ladder].)
- 4. Check width A on the test pattern Ladder meets the specifications.

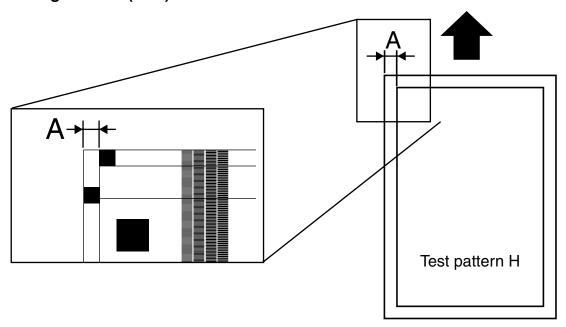
  If width A falls outside the specified range, perform following steps to make the adjustment.
- 5. To use the "Printer registration mode," press <Setting> , <\*> , <4> , <3> and then select the cassette.
- 6. Select "Vertical Regi", and then adjust the "Vertical Registration". If the width A is shorter than the standard, increase value. If the width A is longer than the standard, decrease value.
- 7. After you have finished the adjustment, you must reenter the setting of Unique Switch 52, you changed in step 2.

**Important:** The setting you have entered in Printer registration mode is reflected in the following Machine parameters.

Cassette 1: Machine parameter 180, 220, 240 Cassette 2: Machine parameter 181, 221, 241 Bypass Tray: Machine parameter 187, 227, 247 Duplex Unit: Machine parameter 188, 228, 248

- Machine Parameter 180 to 188 Adjust the start point to printing. (Vertical)
- Machine Parameter 220 to 228 Adjust the top margin.
- Machine Parameter 240 to 248 Adjust the bottom margin.

#### **Printer registration (side)**



Adjust so that width A on the test pattern Checkered output falls within the following range.

Standard	Standard Adjustment Tool	
10 ± 1.8 (mm)	Machine peremeter: 100, 140, 160	-12.8 to 12.7 (mm)
	Machine parameter: 100, 140, 160	(0.6773 mm step)

#### Adjustment procedure

- 1. Load legal (for USA version) or A4 (for GBR version) size paper to the cassette or tray you want to adjust.
- 2. Use the Unique Switch 52 to adjust the printing margin to 0 mm. (bit 0,  $1 \rightarrow 0$ )
- 3. Printout the test pattern "Ladder". (Press < Setting> , <\*> , <0> , <9> , [Test Pattern Print] , [Ladder].)
- 4. Check width A on the test pattern Ladder meets the specifications.

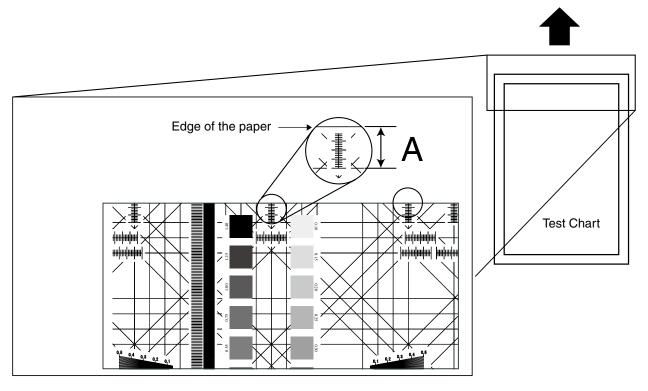
  If width A falls outside the specified range, perform following steps to make the adjustment.
- 5. To use the "Printer registration mode," press <Setting> , <\*> , <4> , <3> and then select the cassette.
- 6. Select "Vertical Regi", and then adjust the "Vertical Registration". If the width A is shorter than the standard, increase value. If the width A is longer than the standard, decrease value.
- 7. After you have finished the adjustment, you must reenter the setting of Unique Switch 52, you changed in step 2.

**Important:** The setting you have entered in Printer registration mode is reflected in the following Machine parameters.

Cassette1: Machine parameter 100, 140, 160
Cassette2: Machine parameter 101, 141, 161
Bypass Tray: Machine parameter 107, 147, 167
Duplex Unit: Machine parameter 108, 148, 168

## 5.3.3 Registration adjustment

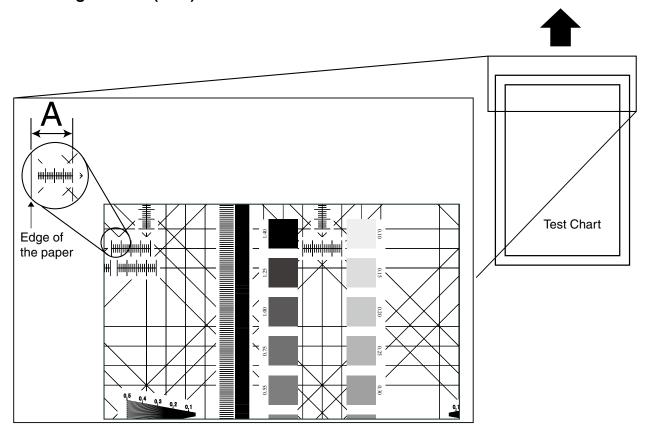
### FBS registration (top)



**Note:** This adjustment must be made after the adjustments of printer registration (top and side) of the 1st cassette and FBS zoom adjustments (vertical and horizontal) have been made.

Standard	Adjustment Tool	Setting Range	
0 ± 2.2 (mm)	Machine parameter:018	− 2.70 ∼ 2.70 (mm) (0.0212 mm step)	

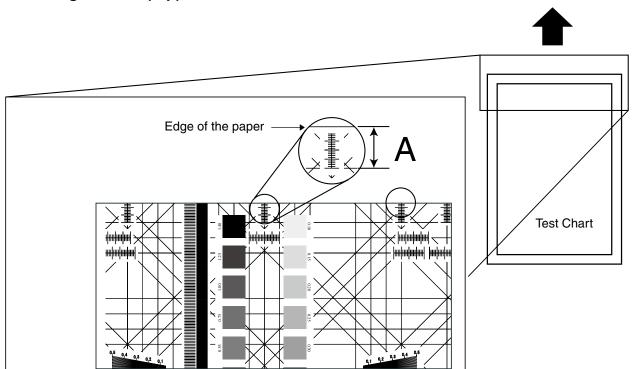
- 1. Load legal (for USA version) or A4 (for GBR version) size paper to the 1st cassette.
- 2. Place the Muratec Test Chart No. 2003-01 on the FBS glass.
- 3. Make a copy of it in the 1st cassette with 100 % magnification.
- 4. Check that the difference of width A and the copy of A (A') meets the specifications. If the difference falls outside the specified range, perform the following steps to make the adjustment
- 5. Enter Machine Parameter mode. (Press <Setting>, <\*>, <0>, <0>)
- 6. Adjust the setting of Machine Parameter 018 to meet the specification. If the width A is shorter than the standard, decrease value. If the width A is longer than the standard, increase value.



**Note:** This adjustment must be made after the adjustments of printer registration (top and side) of the 1st cassette and FBS zoom adjustments (vertical and horizontal) have been made.

Standard	Adjustment Tool	Setting Range	
0 ± 2.6 (mm)	Machine parameter:015	$-$ 10.76 $\sim$ 10.76 (mm) (0.0847 mm step)	

- 1. Load legal (for USA version) or A4 (for GBR version) size paper to the 1st cassette.
- 2. Place the Muratec Test Chart No. 2003-01 on the FBS glass.
- 3. Make a copy of it in the 1st cassette with 100 % magnification.
- 4. Check that the difference of width A and the copy of A (A') meets the specifications.
  If the difference falls outside the specified range, perform the following steps to make the adjustment.
- 5. Enter Machine Parameter mode. (Press <Setting>, <\*>, <0>, <0>)
- 6. Adjust the setting of Machine Parameter 015 to meet the specification. If the width A is shorter than the standard, increase value. If the width A is longer than the standard, decrease value.

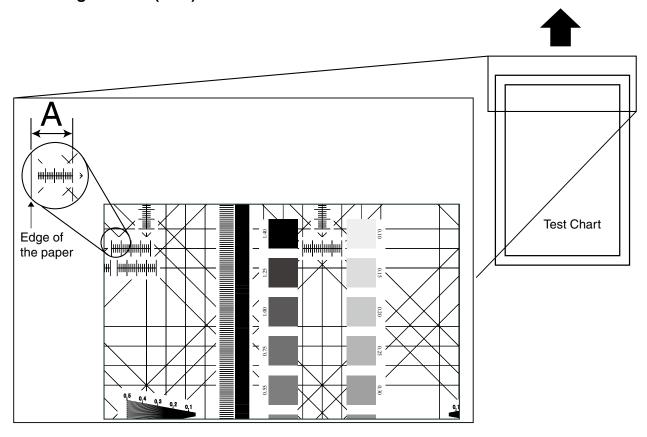


**Note:** This adjustment must be made after the adjustments of printer registration (top and side) of the 1st cassette and ADF zoom adjustments (vertical and horizontal) have been made.

Standard	Adjustment Tool	Setting Range
0 ± 2.2 (mm)	Machine parameter:013	$-10.76 \sim 10.76  ext{ (mm)} \  ext{(0.0847 mm step)}$

- 1. Load legal (for USA version) or A4 (for GBR version) size paper to the 1st cassette.
- 2. Place the Muratec Test Chart No. 2003-01 on the ADF.
- 3. Make a copy of it in the 1st cassette with 100 % magnification.
- 4. Check that the difference of width A and the copy of A (A') meets the specifications.

  If the difference falls outside the specified range, perform the following steps to make the adjustment
- 5. Enter Machine Parameter mode. (Press <Setting>, <\*>, <0>, <0>)
- 6. Adjust the setting of Machine Parameter 013 to meet the specification. If the width A is shorter than the standard, decrease value. If the width A is longer than the standard, increase value.

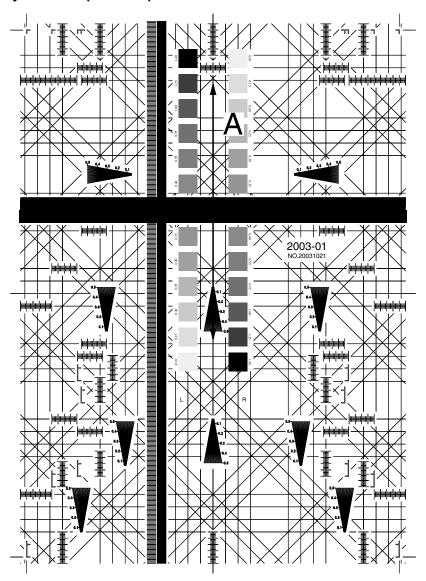


**Note:** This adjustment must be made after the adjustments of printer registration (top and side) of the 1st cassette and ADF zoom adjustments (vertical and horizontal) have been made.

Standard	Adjustment Tool	Setting Range	
0 ± 2.9 (mm)	Machine parameter:010	$-$ 10.76 $\sim$ 10.76 (mm) (0.0847 mm step)	

- 1. Load legal (for USA version) or A4 (for GBR version) size paper to the 1st cassette.
- 2. Place the Muratec Test Chart No. 2003-01 on the ADF.
- 3. Make a copy of it in the 1st cassette with 100 % magnification.
- 4. Check that the difference of width A and the copy of A (A') meets the specifications. If the difference falls outside the specified range, perform the following steps to make the adjustment.
- 5. Enter Machine Parameter mode. (Press <Setting>, <\*>, <0>, <0>)
- 6. Adjust the setting of Machine Parameter 010 to meet the specification. If the width A is shorter than the standard, decrease value. If the width A is longer than the standard, increase value.

# 5.3.4 Zoom adjustment FBS zoom adjustment (Vertical)



**Note:** This adjustment must be made after the adjustments of printer registration (top and side) of the 1st cassette have been made.

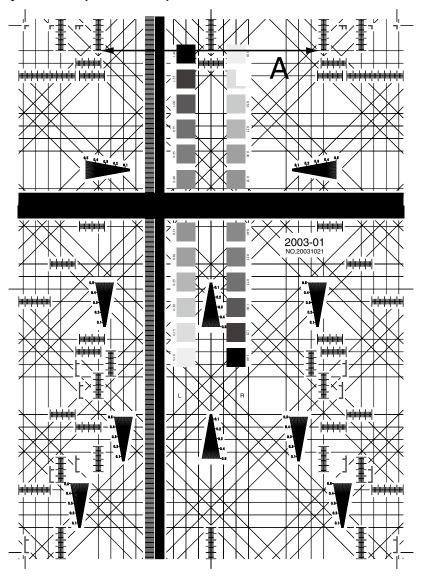
The difference should be within  $\pm$  1.0% of the actual length of A on the test chart No. 2003-01. Adjust so that the following specifications are satisfied with the length of A on the test chart No.2003-01.

Zoom ratio	Standard	Adjustment Tool	Setting Range	
100 %	± 1.0 %	Machine parameter:017	- 1.5 to 1.5 % (0.1 % step)	

- 1. Load legal (for USA version) or A4 (for GBR version) size paper to the first cassette.
- 2. Place the Muratec Test Chart No. 2003-01 on the FBS.
- 3. Make two copies on paper in the 1st cassette with 100 % magnification.
- 4. Measure the length of A on the second copy to find the difference.

  If length A falls outside the specified range, perform the following steps to make the adjustment.
- 5. Enter Machine Parameter mode. (Press <Setting>, <\*>, <0>, <0>)
- Adjust so that the setting of Machine Parameter 017 meets the specification.
   If length A is shorter than the standard, increase value.
   If length A is longer than the standard, decrease value.

#### FBS zoom adjustment (Horizontal)



**Note:** This adjustment must be made after the adjustments of printer registration (top and side) of the 1st cassette have been made.

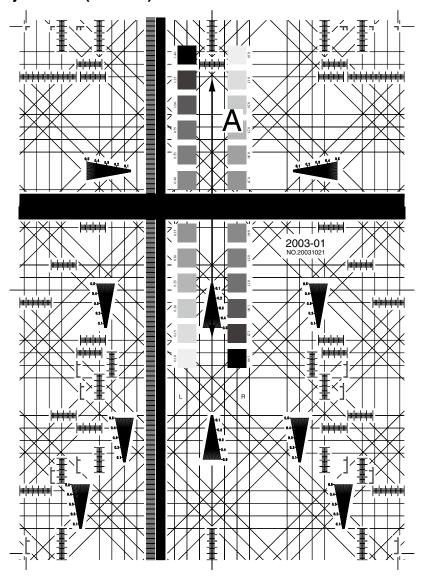
The difference should be within  $\pm$  1.0 % of the actual length of A on the test chart No.2003-01. Adjust so that the following specifications satisfies the length of A on the test chart No. 2003-01.

Zoom ratio	Standard	Adjustment Tool	Setting Range	
100 %	± 1.0 %	Machine parameter:016	– 1.5 to 1.5 %	
	± 1.0 /8		(0.1 % step)	

- 1. Load legal (for USA version) or A4 (for GBR version) size paper to the first cassette.
- 2. Place the Muratec Test Chart No. 2003-01 on the FBS.
- 3. Make two copies on paper in the 1st cassette with 100 % magnification.
- 4. Measure the length of A on the second copy to find the difference.

  If length A falls outside the specified range, perform the following steps to make the adjustment.
- 5. Enter Machine Parameter mode. (Press <Setting>, <\*>, <0>, <0>)
- 6. Adjust the setting of Machine Parameter 016 to meet the specification. If the length A is shorter than the standard, increase value. If the length A is longer than the standard, decrease value.

#### **ADF zoom adjustment (Vertical)**



**Note:** This adjustment must be made after the adjustments of printer registration (top and side) of the 1st cassette have been made.

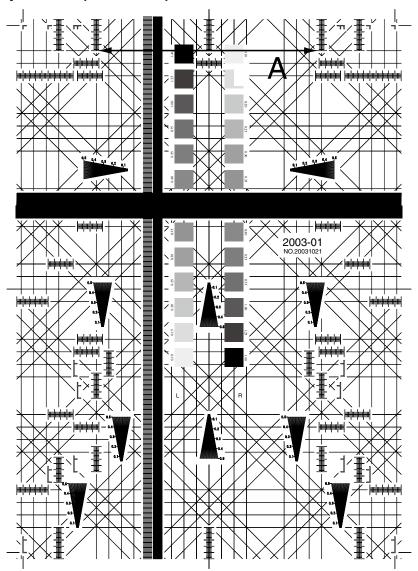
The difference should be within  $\pm$  1.0 % of the actual length of A on the test chart No. 2003-01. Adjust so that the following specifications are satisfied with the length of A on the test chart No.2003-01.

Zoom ratio	Standard	Adjustment Tool	Setting Range
100 %	± 1.0 %	Machine parameter:012	- 1.5 to 1.5 % (0.1 % step)

- 1. Load legal (for USA version) or A4 (for GBR version) size paper to the first cassette.
- 2. Place the Muratec Test Chart No. 2003-01 on the ADF.
- 3. Make two copies on paper in the 1st cassette with 100 % magnification.
- 4. Measure the length of A on the second copy to find the difference.

  If length A falls outside the specified range, perform the following steps to make the adjustment.
- 5. Enter Machine Parameter mode. (Press <Setting>, <\*>, <0>, <0>)
- Adjust so that the setting of Machine Parameter 012 meets the specification.
   If the length A is shorter than the standard, increase value.
   If the length A is longer than the standard, decrease value.

#### **ADF zoom adjustment (Horizontal)**



**Note:** This adjustment must be made after the adjustments of printer registration (top and side) of the 1st cassette have been made

The difference should be within  $\pm$  1.0 % of the actual length of A on the test chart No.2003-01. Adjust so that the following specifications are satisfied with the length of A on the test chart No. 2003-01.

Zoom ratio	Standard Adjustment Tool Se		Setting Range
100 %	± 1.0 %	Machine parameter:011	- 1.5 to 1.5 % (0.1 % step)

#### Adjustment procedure

- 1. Load legal (for USA version) or A4 (for GBR version) size paper to the first cassette.
- 2. Place the Muratec Test Chart No. 2003-01 in the ADF.
- 3. Make two copies on paper in the 1st cassette with 100 % magnification.
- 4. Measure the length of A on the second copy to find the difference.

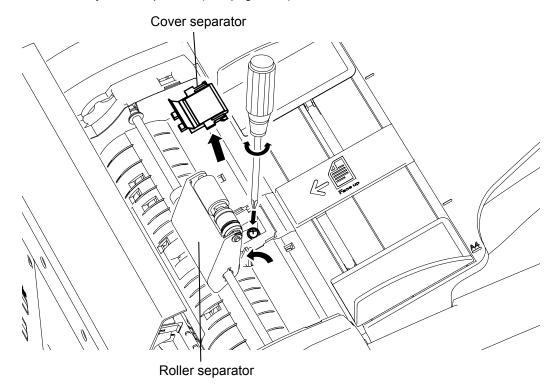
  If length A falls outside the specified range, perform the following steps to make the adjustment.
- 5. Enter Machine Parameter mode. (Press <Setting>, <\*>, <0>, <0>)
- 6. Adjust the setting of Machine Parameter 011 to meet the specification.

If the length A is shorter than the standard, increase value.

If the length A is longer than the standard, decrease value.

# **5.3.5 SEPARATION PRESSURE ADJUSTMENT**

- 1) Open the Guide outer.
- 2) Pick up the Roller separator.
- 3) Remove the assy cover separator. (See page 5-37)



Rotate direction	Separation pressure	
Clockwise	Up	
Counterclockwise	Down	

# 5.3.6 CLEANING THE MIRRORS A, B AND C

#### For MFX-2050 / MFX-1450

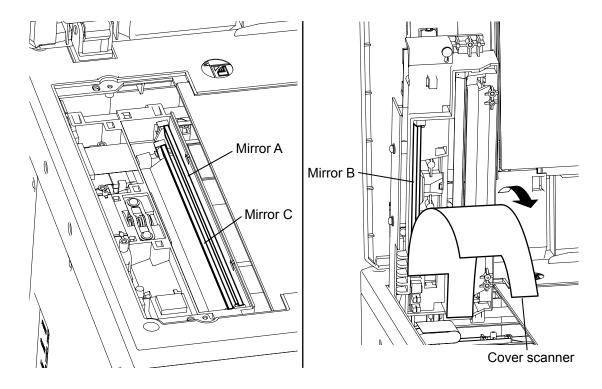
- 1) Remove the Cover contact. (See page 5-17)
- 2) Lift the front of the Frame scanner and remove the Cover lens and Case lamp.

#### For F-565 / F-525

- 1) Remove the Cover ADF base. (See page 5-7)
- 2) Remove the Cover top PPF. (See page 5-13)
- 3) Remove the Cover lens.

#### Now the mirrors A and C are accessible.

- 1) Clean mirrors A and C.
- 2) Peel the Cover scanner off the back of the Frame scanner.
- 3) Now the mirrors B are accessible. Clean mirrors.



# **6 Options**

**CAUTION:** This installation should be done by an authorized Muratec technician.

# 6.1 Memory Upgrade

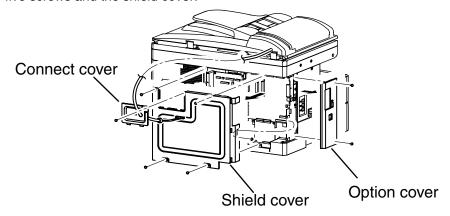
An optional 32 MB document memory upgrade is available.

# 6.1.1 Packaging contents:

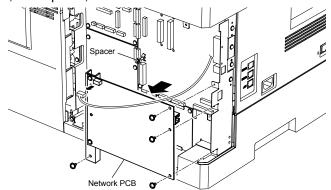
1. Memory module (32 MB) ......1

### 6.1.2 Installation

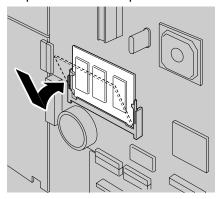
- 1. Turn the machine off and unplug the power cord.
- 2. Remove the covers.
  - 1) Remove one screw and the connect cover.
  - 2) Unplug the harness that is going through the connect cover.
  - 3) Remove two screws and the option cover.
  - 4) Remove five screws and the shield cover.



3. Release three screws, one Spacer, and then PCB NGP.



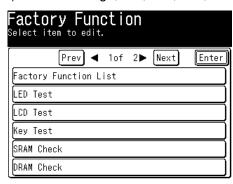
4. Holding the memory module only by the edges, gently but firmly set the memory module to the memory slot (P1 connector), then push it until it snaps.



- 5. Reattach the PCB NGP and the covers.
- 6. Plug the power cord and turn the machine on.
- 7. Initialize the memory module by pressing <Setting>, <\*>, <1>, <6>, and [Yes].

Note: This setting ([DRAM clear]) will erase all of stored documents in the machine's memory.

- 8. Perform the memory test ([DRAM clear]) by the following procedure.
  - 1) Press <Setting>, <\*>, <1>, <1>, then select [DRAM Check] .



2) Use the numeric keys and one-touch keys [01] through [06] to enter Hex code (00 to FF), and press <Start>.

Use the sharp key (#) to enter A, B, C, D, E and F. See table below.

Α	В	С	D	Е	F
#, 0	#, 1	#, 2	#, 3	#, 4	#, 5

DRAI	M Chec	k		
Hex	code:	_		

3) Enter RAM check area by number. (See table below)

Press	Check area	
0	All DRAMs	
1	The standard memory on the main control board	
2	The first half of the 32MB Optional Memory PCB	
3	The second half of the 32MB Optional Memory PCB	

DRAM Check	(
Hex code:	00
DRAM Area	: _

- 4) Press <Start>.
- 5) The machine shows the checked result. Press <Reset> to go back to the standby mode.
- 9. Print the "Fax Settings List" by pressing <Setting>, [List], [Setting List], [Fax Setting], and [Yes] to see the memory amount becomes 40960 KB (40 MB).
- 10. Turn the machine off.
- 11. Reattach the covers and the harness.

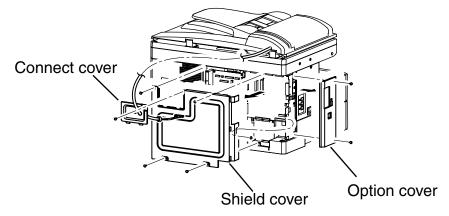
# 6.2 Second paper cassette

# 6.2.1 Packaging contents:

Optional paper cassette	1
2. Second cassette back cover	1
3. Screws	5
4. Paper size label	1

### 6.2.2 Installation

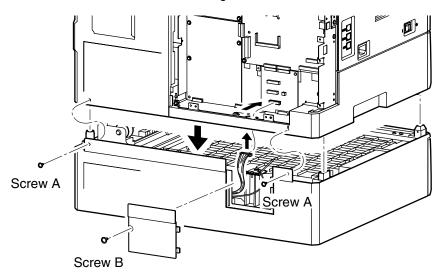
- 1. Turn the machine off and unplug the power cord.
- 2. Remove the covers.
  - 1) Remove the connect cover screw and the cover.
  - 2) Unplug the harness that is going through the connect cover.
  - 3) Remove the two screws and the option cover.
  - 4) Remove the five screws and the shield cover.



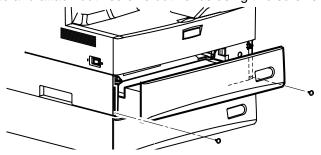
3. Set the machine on top of the optional cassette.

**Note:** Make sure the machine is lined-up with the second cassette before you attempt to set the machine down.

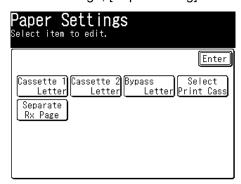
- 4. Slide the harness through the machine and attach the connector (P93).
- 5. Connect the backside of the machine using two screws.
- 6. Attach the backside of the second cassette using one screw.



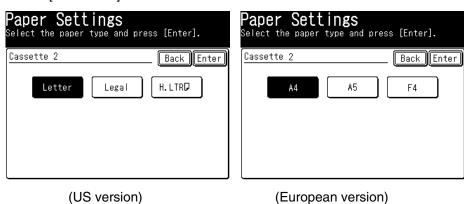
7. Open the first cassette and attach both screws both ends using two screws.



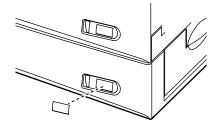
- 8. Reattach the covers and the harness.
- 9. Press <Setting>, [Paper Setting].



10. Select [Cassette 2].



- 11. Select the paper size of the second paper cassette, and press [Enter].
- 12. Press <Reset> to exit.
- 13. Apply the correct paper size label to the cassette.



# **6.3 Page Counter**

The mechanical counter shows the total number of pages the machine prints.

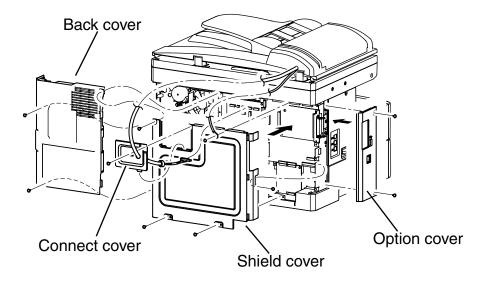
**Note:** This device counts up to 999,999 pages. If more pages are printed, the counter resets to zero and begins counting the new pages from that point.

# 6.3.1 Packaging contents:

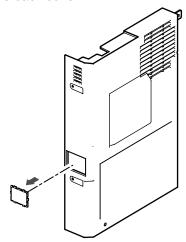
1.	Mechanical counter	•
2.	Relay cable	
	Screw	

### 6.3.2 Installation

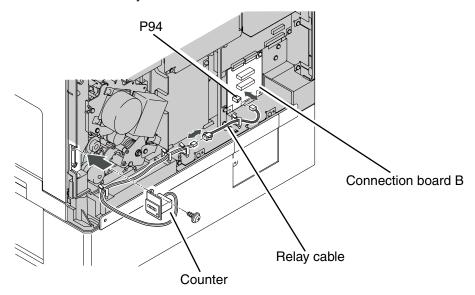
- 1. Turn the machine off and unplug the power cord.
- 2. Remove the covers.
  - 1) Remove the connect cover screw and the cover.
  - 2) Unplug the harness that is going through the connect cover.
  - 3) Remove the two screws and the option cover.
  - 4) Remove the five screws and the shield cover.
  - 5) Remove the two screws and the back cover.



3. Gently punch out the panel on the back cover.



- 4. Fasten the counter to the machine frame using a screw.
- 5. Connect the relay cable to the P94 connector on connection board B.
- 6. Attach the other end of the relay cable to the counter cable.



7. Reattach the covers and the harness.

Be sure that wires are not caught when reattaching the covers.

The counter will now count the number of pages printed.

**Note**: When it is absolutely necessary to touch the ICs and other electrical components on the board, be sure to ground your body.

# **6.4 PCL printer controller**

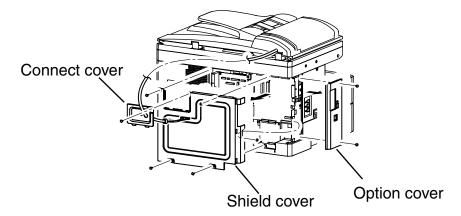
# 6.4.1 Packaging contents:

1. PCL printer board	1
2. Spacers	2
3. Screw	2
4 CD	1

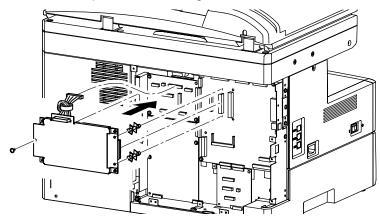
Note: Two screws are included, but only one is required to for installation.

#### 6.4.2 Installation

- 1. Turn the power off and unplug the power cord.
- 2. Remove the covers.
  - 1) Remove the connect cover screw and the cover.
  - 2) Unplug the harness that is going through the connect cover.
  - 3) Remove the two screws and the option cover.
  - 4) Remove the five screws and the shield cover.



- 3. Attach two spacers to the Main PCB.
- 4. Attach the PCL printer board to the machine and connect the cable to the P82 connector.
- 5. Attach the left side of the PCL printer board using one screw.



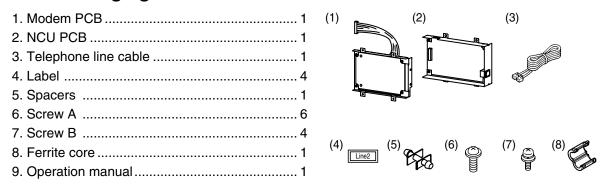
- 6. Reattach the shield cover and the option cover.
- 7. Connect the ADF cable to the connector on the PCB bracket.
- 8. Reattach the connect cover.

<sup>\*</sup>Use the enclosed CD to install the print drivers.

# 6.5 Second phone line kit

This option is not available in every country.

## 6.5.1 Packaging contents:

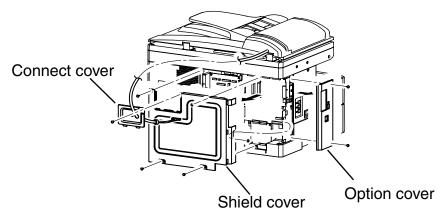


Note: 6 screws (A) are included, but only 2 are required to for installation.

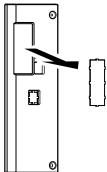
Note: The telephone line cable looks different according to the country.

#### 6.5.2 Installation

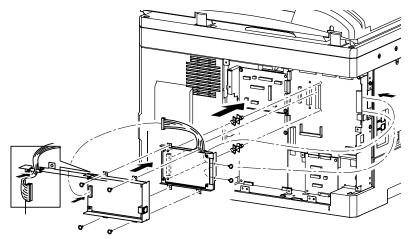
- 1. Turn the power off and unplug the power cord.
- 2. Remove the covers.
  - 1) Remove the connect cover screw and the cover.
  - 2) Unplug the harness that is going through the connect cover.
  - 3) Remove the two screws and the option cover.
  - 4) Remove the five screws and the shield cover.



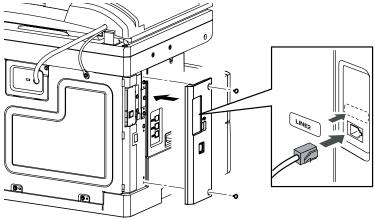
3.Use the nippers to carefully punch out the panel on the option cover.



- 4. Attach two spacers to the main board.
- 5. Attach the Modem PCB to the spacers and screw the right side of the board to the machine frame using two screws. (Screw A)
- 6. Attach the NCU PCB onto the Main PCB using four screws. (Screw B)
- 7. Connect the harness to the NCU PCB.
- 8. Clamp the harness to the NCU PCB's bracket.



- 9. Reattach the covers and the harness.
- 10. Wind the telephone line around the ferrite core and connect it to Line 2.
- 11. Attach the "Line 2" label above the plug.



2 1 /COUNT 1 2 DCB-D0224-50A

Z90-35223-50

